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ABSTRACT

Intended for use in a comprehensive senior high school, this curriculum guide for an introductory laboratory course focuses on the development of abilities, attitudes, and personal qualities which would lead to job success at the entry level in the food service industry, including in the areas of cooking, waitressing, supermarkets, and similar occupations. It is designed for minimum time of 360 class periods. Each of the 27 instructional units includes objectives and lesson activities. Units are titled (1) Introduction to Food Services, (2) Introduction to Food Preparation, (3) Following Recipes--Meat Extenders, (4) Terminology--Culinary Terms, (5) Measuring--English System, (6) Introduction to Metric Measuring, (7) Calculating Costs of Products--English System, (8) Quick Breads, (9) Cereal Cookery, (10) Eggs, Egg Cookery, (11) Principles of Milk Cookery--White Sauce, (12) Uniformity of Product--Cookies, (13) Employment Opportunities, (14) Efficiency, (15) Fact or Opinion, (16) Basic Nutrition, (17) Menu Planning, (18) Carbohydrates, (19) Fats and Oils, Pastry and Deep Fat Frying, (20) Proteins--Meat Cookery, (21) Minerals--Fish Cookery, (22) Vitamins, (23) Vegetables, (24) Nutrition Summary--Salads, (25) Introduction to Food Service, (26) Introduction to Food Sales--Sandwiches, and (27) Terminology--Gourmet Foods. (HD)

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State of New Jersey
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ED140035

FOOD PREPARATION AND SERVICE

AN INTRODUCTORY COURSE FOR FOOD SERVICES CAREERS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PREFACE

This publication is one of a series of curriculum documents in career education written under the statewide curriculum development project conducted by the New Jersey Curriculum Management Center. Materials developed under this project are published by the New Jersey Vocational-Technical Education Curriculum Laboratory in order to ensure the widespread availability of these materials to practitioners in the field at a reasonable cost.

Dr. Joseph F. Kelly

Project Director
New Jersey Curriculum Management Center

INTRODUCTION

This curriculum was initially intended for use in a comprehensive senior high school setting. It grew out of an interest in and need for introducing boys and girls to career opportunities in food-related occupations. Its primary focus is the development of abilities, attitudes, and personal qualities which would lead to job success in the food service industry.

As an introductory laboratory course, it represents a survey approach with a moderate amount of skill training. It is designed for a minimum time of 360 class periods. Students should be able to gain entry level employment skills in a variety of basic jobs within the industry, including cooking, waitressing, supermarkets, and similar occupations. It is suggested, however, that the course be followed in subsequent years by more advanced courses which include skill training, or by cooperative industrial education programs involving food-related occupations. Some students may elect to obtain further training upon graduation in two-or four-year institutions that offer advanced programs.

The curriculum has been written for use with students of diverse interests and abilities. Activities, learning experiences and evaluative techniques emphasize student participation, thought, creativity, planning, problem-solving, and the responsible management of personal and public resources. It also provides for the development of individual competencies while students engage in individual and group projects. Evaluation of student progress is viewed as an ongoing, non-threatening and cooperative process involving considerable input by the student as well as combined appraisal by both teacher and student.

Several themes run through the curriculum, although they may or may not be introduced as separate topics. These include: management, consumer awareness and competencies, self-awareness, creative thought and problem solving, the management of interpersonal relationships, employment opportunities, general employability, as well as an interdisciplinary approach to concepts basic to the food service industry.

Food Services Curriculum Objectives

1. Demonstrates a knowledge of basic principles and techniques of food preparation.
2. Is able to read, plan for, and carry out instructions in a variety of recipe resources according to acceptable standards of quality.
3. Demonstrates a clear understanding of terminology used in food preparation.
4. Evidences competencies in decision-making, problem-solving, coping with crises.
5. Uses time, materials, references, and resources effectively; demonstrates competency in using management principles.
6. Exhibits a positive attitude toward the selection, preparation, and sampling of a wide variety of foods.
7. Demonstrates a sense of pride in workmanship; gives evidence of concern for standards of workmanship including accuracy and aesthetic sense in preparing and serving final products of high quality.
8. Conducts comparative studies evaluating use, cost, ease of preparation, aesthetics of a variety of foods.
9. Calculates the cost of products.
10. Evidences a knowledge of nutrition and its effects on people; understands the principles of food preparation relative to nutrition; plans menus which reflect knowledge of nutritional needs.
11. Demonstrates a respect for materials, equipment, and products prepared in class.
12. Relates scientific, psychological and sociological principles to food preparation and service.
13. Exhibits attributes of general employability including; initiative, promptness, dependability, courtesy and cooperation, cleanliness, safety, working effectively with others, maintaining regular attendance, willingness to do necessary and menial jobs, a sense of responsibility for activities and their outcomes.
14. Knows how to serve foods in various kinds of settings.
15. Exhibits ability to prepare and serve foods attractively and efficiently.
16. Recognizes and produces acceptable food products for public consumption.
17. Organizes tools, foods, and sequences of activity for maximum efficiency in tasks.
18. Knows and applies appropriate techniques in planning, storing, and serving foods.

19. Uses safe and sanitary methods of handling food.

20. Uses appropriate tools for tasks.

21. Handles equipment safely and efficiently in all operations from preparation to clean-up.

22. Can discuss a range of employment opportunities available, including training requirements, personal qualifications, and employment outlook.

23. Evidences an understanding of legal aspects of employment in food preparation and service industries.

24. Can discuss consumer legislation and is able to plan and conduct course of action by which to influence legislation concerning food products.

25. Identifies personal goals and values and arranges them in priorities.

26. Demonstrates an ability to manage personal resources.

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UNIT I – INTRODUCTION TO FOOD SERVICES

Objectives: At the conclusion of this unit the student will –

Demonstrate a knowledge of organization and management procedures

Be able to use resources including cookbooks and references readily

Identify, locate, and describe the care and use of equipment

List safety procedures and precautions in the foods lab.

Topics:

A. Organization of Personnel
B. Textbooks, Cookbooks and References
C. Equipment Identification and Location
D. Laboratory Procedure
E. Safety

Topic A – Organization of Student Personnel

Objectives: At the conclusion of this lesson the students will –

Form congenial, productive work groups. Establish working atmosphere.

Identify specific roles/duties to be carried out throughout a designated period of time: month, semester, year.

Develop mechanisms for smooth efficient functioning of classroom organization.

Lesson Procedures

1. Interview technique – or some means of enabling students to become acquainted with one another and the teacher. Students interview one other student, then give a brief oral synopsis about the person interviewed.

2. Distribute student data sheets – these will provide useful information to the teacher and may be used in conducting follow-up studies.

3. Sociogram – students will select two students with whom they would like to work. Use ballots to collect the information. The teacher will set up lab groups, placing students in groups where a) they want to be, or b) they *are wanted.*

4. Assign each student a specific duty (with a job description) to be carried out for the year (or shorter period if desired). Possible areas to be covered are as follows:

   A. Folders – Distributes student folders on non-lab days. Collects folders at the end of each period and stores them in the assigned place.

   B. Bookcases – Maintains order in bookcases in lab. Supervises the return of books to the shelves when they are used.

C. Refrigerator – Thoroughly cleans refrigerator upon request of teacher. Cleans outside every lab day. Maintains order in refrigerator daily.

D. Laundry area – Uses cleaning cloth to wipe counter surfaces and washer and dryer. Folds and puts away clean, dry linens. Upon request of the teacher, launders towels and other linens.

E. Food cabinets – Keeps spices in alphabetical order. At the close of every lab, maintains order in food cabinets, wipes shelves.

F. Aprons – Supervises return of aprons so they are neatly folded and stored in the proper place. Reports torn or damaged aprons to teacher for repairs.

G. General Utensils – Every lab period checks and maintains order in cabinets where utensils are kept. Supervises return of pans and equipment to ensure cleanliness.

H. Floor area and garbage – Cleans floor area, empties garbage cans. Using cleaning cloths wipes tops and sides of garbage cans.

I. Lab manager – Gets out foods, ingredients. Purchases milk from cafeteria, if needed. Supervises use of food supplies. Maintains clean work area. Is responsible for overall work. Supervises work of special jobs. Effects a clean-up check.

J. Tables and counters – Cleans counters, sinks, canisters, tables and area under sink.

K. Cabinet clean-up check – At the close of the period, checks each kitchen to see that utensils are clean and returned to the proper place.

5. Set up a schedule for lab manager.

Note: A lab manager can facilitate the laboratory experiences by freeing the instructor to assist students. The lab manager should serve for at least three weeks in order to become familiar with the job. This duty should rotate. Lab management gives students direct experience in supervising personnel and managing materials and equipment. Students may volunteer for this or be selected. Often aggressive students and those not necessarily geared to pencil-and-paper activities prove to be excellent managers. A job description of the position of lab manager follows:

Gets out foods, ingredients.
Purchases milk from cafeteria, if needed.
Supervises use of food supplies.
Maintains clean work area.
Is responsible for overall work.
Supervises work of special jobs.
Effects a clean-up check.

Topic B – Using Textbooks, References, Resources

Objectives: The student will locate information in cookbooks and textbooks.

The student will find specific data such as emergency substitutions, definitions, and recipes.

The student will use indexes effectively.

The student will evaluate resources.

Lesson Procedures:

1. Provide cookbooks for each student. Study its organization together. Using a checklist or worksheet, have the students examine and evaluate one or several cookbooks. Use worksheet "Becoming Acquainted with Cookbooks". (p. 25)

2. In subsequent lab write-ups or worksheets include questions and problem-solving situations, which will enable students to use textbooks. Have a variety of texts on hand for students of various reading and interest levels.

3. Develop a short worksheet for textbooks to identify the kinds of information provided. The following sample questions might be helpful:

   a. What major topics are covered?

   b. Are there charts which show the nutritive values of a number of foods?

   c. Are there pictures and illustrations showing procedures on food preparation?

   d. Where are the following points of information located?

4. Students chart specific points of information found in textbooks. For example:

Point of Information	Pages	Comment
Daily minimum food requirements of a variety of age groups of people.		
Meat charts showing cuts of meat and where they are located		
Directions for preparing white sauce		
The basic four food groups		
The functions of ingredients in recipes		

Topic C – Equipment Identification and Location

Objectives: At the conclusion of this unit the student will –

Identify and know the location of large and small equipment, appliances, and utensils.

Lesson Procedures

1. Provide students with a list of laboratory equipment, appliances, and utensils indicating their proper location. Explain and demonstrate the use of equipment. This procedure should be continued throughout the year, particularly with utensils and equipment that is for specific purposes.

   A sample equipment list appears on the Sample Student Inventory. (p. 5)

2. Provide a floor plan or diagram of the laboratory. Have students locate equipment, materials, supplies, and utensils.

3. Test for understanding by using games or exercises in which students indicate their knowledge of where things belong.

   Example: a. Number cabinets. Students name cabinet where particular item belongs.

   Example: b. Have students put items away.

4. Have students take inventory; assist with placement and organization in the lab.

5. Using a guide sheet or manual, have students become acquainted with the use and care of the range. Have students demonstrate their ability to use:

   a. The top burners plus special features such as grill, sensi-temp, automatic cooking, 6-8-10 inch burners.

   b. The oven

   c. The broiler

   d. The minute timer

   e. The timed-cooking device

   f. The rotisserie, if one is included, oven cleaner if one is provided.

   g. The correct rack positioning (remove and replace).

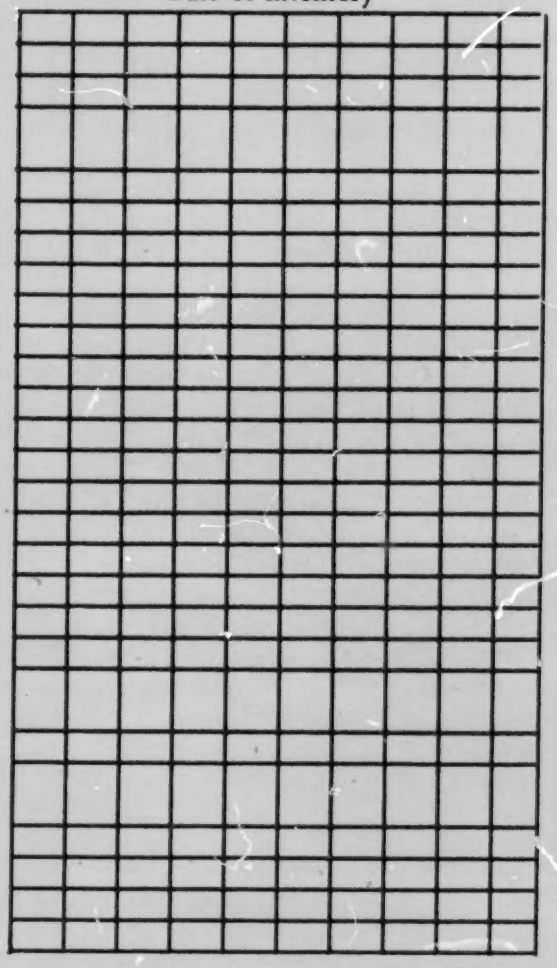
6. Review cleaning and care procedures. Use a check-list for each student to indicate competency in understanding how the range operates.

STUDENT INVENTORY

Food Lab – Equipment and its Placement

The following items belong in each individual kitchen:

Date of Inventory



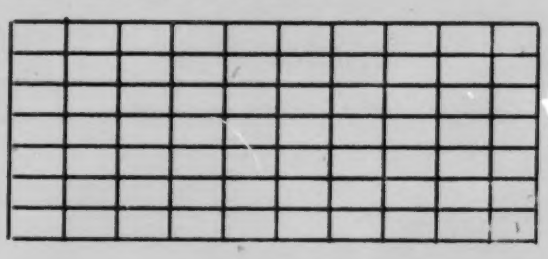
1 set colored mixing bowls (4)
1 c measuring cup
2 c measuring cup

1 cooking spoon
1 slotted spoon
1 pancake turner
1 metal spatula
1 rubber spatula
1 cooking fork
1 paring knife
1 rolling pin
1 pastry blender
2 sets measuring spoons (4)
2 sets dry measuring cups (4 each)
2 wooden spoons
1 rotary (egg) beater
1 can opener
1 peeler
1 pr. tongs
1 pr. scissors

5 each flatware
1 set dishes

1 sifter
1 colander
2 fry pans
3 sauce pans
1 double boiler

The following items DO NOT BELONG IN INDIVIDUAL KITCHENS:



CLEAR glass bowls and casseroles
French knives and carving knives
Baking pans
Saucepan covers or lids
Wire whips
Serving utensils
DRINKING GLASSES

Topic D – Laboratory Procedure

Objectives: The student will use a lab plan form when planning for the preparation of a product.

The student will evidence an understanding of procedures to be followed in the foods lab.

The student will develop and follow a systematic plan when working in a foods lab.

The student will self-rate performance in clean-up procedures.

Lessons and Evaluations:

1. Distribute and illustrate examples of the use of lab plan forms. Advise kitchens to submit forms for each lab preparation.

2. Distribute and explain laboratory procedures. Post on bulletin board. Propose hypothetical problems and have students respond to determine extent to which they have internalized procedures.

3. Distribute Plan for Worksheet. Have students file for future reference and use plan when preparing foods, or demonstrate the use of such a plan in class.

4. Distribute Clean-Up check sheet. Assign specific students to rate kitchens with respect to clean-up. Boxes on the left side of sheet may designate kitchen so that all kitchen ratings for one day may be obtained; or may indicate dates so that improvement over a period of time for one kitchen may be charted.

LAB PLAN FORMS _____

Period _____ Kitchen _____

Product _____ Recipe source _____

_____ _____

Time Schedule

Organization

Shopping List

Report submitted by _____

FOODS LABORATORY PROCEDURES

1. Each student is responsible for the order and cleanliness of assigned kitchen.

2. Books and personal belongings are to be placed in the designated area in each kitchen while food is being prepared and served.

3. Supplies are to be obtained from the lab manager. Students are not to remove materials from storage areas without permission of the teacher or the lab manager.

4. Central containers are not to be removed from the supply area.

5. Students are to demonstrate a respect for the materials and equipment in the lab at all times. Food is not to be played with, thrown, or eaten indiscriminately. Equipment is to be handled with care.

6. Students are to remain in the laboratory for the duration of the period. No student is to leave the room without permission of the teacher. Students obtaining the pass are to record their destination on the sign-out book provided. Passes are to be used for emergencies only.

7. Students are to make use of class time by working on assignments and organizing and cleaning work areas when there are no specific activities to perform.

8. Absence results in a loss of important experiences. Absences may be made up through home practice or by repeating the work on one's own if possible. Absences should be kept to an essential minimum.

9. Each student will be assigned a special duty in the lab. These are to be performed daily or on each lab day, depending on the assignment.

10. At the close of each lab period students are to leave the cabinets in their kitchens open for inspection by the lab manager or teacher or other person designated for the task. Students are to remain until the check is complete. For this reason it is important to work well and gauge the time to provide for this activity. Students are to cooperate in maintaining a clean, orderly, sanitary lab.

11. Students who are not enrolled in the foods program may not visit the lab. Students in foods classes should discourage their friends who are not enrolled from standing in the doorways and from entering the lab. Food is not to be given to other students outside of the class without the consent of the teacher.

12. All products which are prepared in class will be sampled or distributed under the supervision of the teacher. Food is not to be taken to other parts of the building during the school day. Should you wish to take a sample of a product home, make arrangements with the teacher to pick it up after school.

A PLAN FOR WORK

Locate and read the recipe. Check the following items:

1. Do you have all of the ingredients?
2. Do you have all of the utensils required?
3. How much time does the entire recipe take?
4. Do you have the knowledge and skill that the recipe requires?

Plan your work schedule.

Light the oven (if necessary).

Assemble ingredients.

Assemble equipment.

Do any preliminary preparations: grease pans; chop nuts, raisins, dates, etc. (beat eggs, scald milk, melt fat just before use).

Measure ingredients before starting to mix.

Prepare the food according to directions.

Clean up. Cleaning up as you go speeds and lightens the final clean-up.

FOODS LAB CLEAN UP CHECKSHEET

Kitchen _____ **Score:**

1 – poor
2 – fair
3 – good

Are all drawers neat and orderly? _____

Is all equipment *clean* and in its place? _____

Is any equipment missing, or are there extra pieces? _____

Are towels and wash cloths neatly hung up or placed in washing machine? _____

Are soap pads wrapped in a paper towel and placed in basket provided? _____

Is the floor of the cabinet neat and clean? _____

Are the sinks thoroughly cleaned? _____

Is the soap dish clean? _____

Are the strainers clean and in place? _____

Are marks from aluminum pans removed? _____

Are edges around sink cleaned of food and dust particles? _____

Are counter surfaces clear and clean? _____

Are canisters clean and filled? _____

Have the garbage cans been lined before placing garbage in them? _____

Were all cartons flattened so there will be a minimum of overflow? _____

Are all burners and ovens turned off? _____

Are tops of stoves cleaned thoroughly? _____

If there was extra time, were the bottoms of ovens cleaned? _____

Are the tables cleared and wiped thoroughly? _____

Is the floor reasonably clean? _____

Was all spilled material – flour, water, etc. – cleaned up . _____

Have the cabinet doors, particularly the lower ones, been wiped clean? _____

Were aprons neatly put away and were all cabinet doors closed? _____

Were all books replaced neatly on the shelves? _____

This is your lab for your education, use and enjoyment. It is to your advantage to keep it looking as presentable as possible.

A clean lab is also a more functional one.

Topic E – Safety

Objectives: The student will use safe procedures in the foods laboratory.

The student will select equipment carefully and use it appropriately.

The student will demonstrate a regard for and appreciation of materials and equipment in the laboratory.

Lessons:

1. Distribute Health and Safety in the Laboratory sheets. Discuss and demonstrate all of the points. Use overhead transparencies or film strips on safety if available.

2. Students may make a bulletin board depicting safe and unsafe procedures.

3. Have students sign one copy of the safety sheets and file. This is important as student acknowledges his understanding of and commitment to safety procedures.

4. Distribute, explain, demonstrate, and discuss care of equipment in the laboratory.

Additional Activities:

Research insurance requirements, Public Health Laws and Regulations for restaurants and other kinds of food service establishments.

Evaluation:

Student will use safe and healthy practices.
Quiz

Resources:

Ahern, *Safety Training Manual for Restaurants and Hotels,* Ahrens Publishing Co.

HEALTH AND SAFETY IN THE LABORATORY

1. Knives and Scissors
   A. Wash any knives used and remove from sink, rather than dropping them into murky dishwater and leaving them there to cut some unwary person.
   B. Keep all knives in racks when not in use as a safety measure to protect their edges.
   C. When washing or handling knives or other sharp tools, keep edges away from you.
   D. When giving a knife to anyone, pass handle first.
   E. Carry knives with the blade down, carry scissors by the closed blades.

2. Graters and Shredders
   A. Hold whatever is being grated well above grating surface.
   B. Store graters by themselves in drawer, rough surfaces turned down.

3. Saucepan handles must be kept within area of top of range, but not over burner which is in use.

4. Never touch an electric appliance with wet hands, or when standing on a wet floor. Never pry toast from a toaster with a fork or a knife while the toaster is plugged in. Unplug it or use wooden prongs.

5. Avoid and know how to combat fire.
   A. Fire extinguishers: commercial, baking soda. Never use water to extinguish a grease fire.
   B. Fire blanket.
   C. Do not sit on counters, put papers on stoves, or lean against stoves. These are all potential fire hazards.
   D. Do not use a towel as a potholder.
   E. When cooking in deep fat be sure pan is no more than 1/3 full. Use a sturdy pan.
   F. In the event of a broiler fire:
      1. Close the door.
      2. Turn off the heat and allow fire to burn out.
      3. Or use baking soda.

6. Preventing falls, bumps, and accidents
   A. Wipe spills immediately, especially egg, milk, grease, syrups, or other slippery substances.
   B. Keep cabinet doors closed.
   C. Grip jars firmly by the bottom or sides, do not lift using lids. Keep lids tight when storing foods.

7. Dress. Long fluffy sleeves, loose cardigan-type sweaters, very high shoes, are all potential dangers in the kitchen. Dress appropriately. Hair should be neatly tied back, secured, or netted.

8. Save "horse play" and roughhousing for the gymnasium.

Signed _____

CARE OF EQUIPMENT IN THE LABORATORY

When any kitchen tool is cared for correctly, its deterioration is kept to a minimum.

1. Measuring spoons are not to be used for prying open lids.

2. Regular cleaning of all kitchen tools, even seldom used ones (as wall can openers) assures maximum efficiency of operation when needed.

3. When wooden tools are left in dishwater for excessive lengths of time, the finish peels off and the wood soon becomes ruffled and splintery. Do not soak boards, rolling pins, and wooden spoons.

4. Lift portable equipment from the bottom, to avoid dropping portions of them.

5. Dispose of grease properly: place it in a container to solidify and throw away. Do not pour it down the sink as it may severely clog the plumbing.

6. Wipe out "seasoned" pans, rather than using harsh cleansers on them; rub with grease if they appear to be losing their seasoning.

USE PROPER EQUIPMENT AND USE EQUIPMENT PROPERLY .

UNIT 2 – INTRODUCTION TO FOOD PREPARATION

Objectives: At the conclusion of this unit the student will –

Organize a work schedule and follow it
Follow a recipe
Use a French knife
Season food and taste food properly
Clean up efficiently
Sauté food

Lessons

1. Distribute lab sheets and discuss expectations as well as procedures for completing lab.

2. Demonstrate procedures (French knife)

3. Assign student(s) to check prices of ground meat in supermarket or purchase a variety of kinds of ground meat, display, and discuss cost, uses, characteristics.

4. Students will plan and prepare Sloppy Joes. For a comparison of ground meat types, have each group use a different kind. Stress the need for uniformity in the remaining ingredients and procedure. Have students sample each and draw conclusions, e.g.

   If dish is heavily seasoned, meat flavor is not a factor.

   If it is difficult to discern differences, cost may be a prime factor.

5. Define recipe – explain and illustrate characteristics of recipes:

   a. List of ingredients and amounts
   b. Specific instructions
   c. Yield

6. Explain and discuss menus.

7. Discuss, demonstrate and practice clean-up procedures.

8. Discuss and demonstrate the use of a tasting spoon when sampling cooking.

9. Discuss accuracy in seasoning foods and the care with which additional seasonings should be added.

10. Differentiate situations in which estimation of amounts is satisfactory and those in which accuracy is required.

11. Discuss evaluation of food lab sheet. Use as a guide:

    a. Discussion of findings in lab
    b. Laboratory evaluation (see sample)

STUDENT LAB SHEET

(Ideas for student responses are listed in parentheses)

Title: *(Let students name the dish)* **Name** _____

Objectives: In this lab you should learn to –

organize a work schedule and follow it
follow a recipe
use a French knife
season food and taste food properly
clean up efficiently
sauté food

Recipe: attached

Menus:

1. What is a recipe?
2. What is a menu?
3. Plan a menu using the product you prepared in class as one of the foods.

Related Information:

1. Type of ground meat

Type of ground meat	Price Range	Uses
Ground round		(in dishes where special flavor of round is desired)
Ground chuck		(all purposes)
Ground beef		(all purpose; where many seasonings are involved, casseroles)
Ground beef, veal, pork combination		(meat loaf, meat balls)

2. Vocabulary

sauté	(toss lightly in frying pan in small amount of fat – sauteed foods include meats, mushrooms)
fry	(cook in fat)
deep fat frying	(cook in fat in which food floats – usually 365°)
dice	(cut in small cubes)
chop	(cut up in pieces, may be finely or coarsely done)
mince	(very finely chopped and pulverized – for garlic, turn knife on side and press)
cube	(cut in square shapes)

3. What are some additional ways or variations you could use to serve the product you prepared? (Students use creative imagination)

4. How should foods be sampled while they are being prepared?

(Use a tasting spoon. Place a small amount of the food in the spoon and sample – avoid sampling directly from the cooking spoon.)

What suggestions for seasoning foods should be followed?

(Season lightly and gradually and taste frequently as you do. Avoid under or over seasoning.)

5. List procedures for clean-up.

   1. *Clean as you work. Prepare soapy water for this purpose.*
   2. *When doing dishes wash glasses, plates, silver, cooking utensils, in that order.*
   3. *Dry all dishes and utensils thoroughly.*
   4. *Return all materials and equipment to proper places.*
   5. *Drain water and clean sink. Use cleanser on aluminum marks.*

Evaluation:

Indicate the things you learned and identify areas where you will need to improve in future labs.

EVALUATION FOR FOODS LESSON

1. What was learned from this lesson or experience? Consider such things as:

   How well did we work as a group?
   Can the work of the group and individuals be improved? How?

2. How did our products rate according to the standards we had set? Why?
   Will these standards change for future experiences at home?

3. Was the product or meal appealing because of good color, flavor, texture, temperature? (variety in all of these, in the case of meals).

4. How well did we reach our goals? Were our plans clearly made so that we were learning? Also, that we knew what to watch for as we worked?

5. What learnings will be used again?

6. Did our work show good use of time and energy?
   Can we improve? How?

7. Do we need further study about such things as table manners and table setting?

8. Are there other safety measures with which we should be concerned?

9. If there were any left-overs from this meal (product) how could they be used?

10. How much did our meal (product)cost? Is it a reasonable amount?

11. Of what nutritive value was the food? How would it fit into the total plan for a day to meet the daily food requirements?

12. What other foods would go well with this food?

Evaluating a Recipe

1. Taste and texture
2. Would the product suit people with varying tastes?
3. Ease of preparation. Was it worth the time spent?
4. Was it economical?
5. Consider use – what foods may accompany it?
6. Nutrition
7. Yield – was it enough? Might it be doubled or halved for home use?
8. Alterations, variations.

UNIT 3 – FOLLOWING RECIPES – MEAT EXTENDERS

Objectives: By the conclusion of this unit the student will:

Plan and carry out a work schedule.

Evidence greater ability to read and follow a recipe.

Define meat extenders and give several examples of their use.

Browse through recipe sources and locate recipes using meat extenders.

Lessons:

1. Distribute student worksheets and discuss objectives with students.
2. Discuss the concept of meat extenders. Allow students to explore cookbooks for examples of recipes using a variety of meat extenders.
3. Distribute recipes to be used in class – suggested: Meatloaf and/or Swedish Meatballs. Allow students to select a recipe to follow. Students develop a work plan to follow.
4. Prepare recipe and evaluate the experience in terms of the objectives.
5. Discuss the forms in which onions and onion products are sold and used.

Resource:

Pollard, *Experiences with Foods*

STUDENT LAB SHEET

Meat Extenders

Project # _____ **Name** _____

Objectives: Plan and carry out a work schedule
Use meat extenders and understand their function in foods
Evidence greater ability to follow recipes accurately

Menus: Plan a menu around the product prepared in class.

Recipes: Attached

Related Information:

1. Meat extenders are combined with meat to create flavorful, economical dishes. As the name implies, these foods sometimes serve to stretch or extend a quantity of meat to provide additional servings. Several commonly used meat extenders are listed below. Complete the chart by browsing through recipe sources and noting examples of dishes using each. Indicate book and page numbers for future reference.

Extender	Examples	Book/Page
bread, bread crumbs		
rice		
macaroni		
potatoes		
others		

2. What is the difference between a meat extender and a meat alternate?

   (A meat extender is added to meat to provide more servings.)
   (An alternate is a food which is not meat but contains many of the nutrients of meat, especially protein. Examples would be soy beans, cheese.)

3. Find recipes which would be suitable for using relatively small amounts (1-2 cups)

   Ham

   Ground Beef

4. List several forms in which onions, chopped onions, and flavorings may be purchased.

FORM	PRICE
Red Onions	
Bermuda Onions	
Dried Onion Flakes	
Onion Juice	
Onion Salt	
Frozen Chopped Onions	
Canned Onions	

UNIT 4 – TERMINOLOGY – CULINARY TERMS

Objectives: The student will be able to define 50 culinary terms and will be able to cite or recognize instances in which they are used.

Lessons:

1. Distribute terms – defined. Students check off familiar terms – review unfamiliar terms.

2. Use games, such as:

   Definition Bee – using teams
   Crossword puzzles

Additional Activities

Prepare foods using a variety of techniques.

Evaluation:

Quizzes
Student performance

VOCABULARY OF COOKING TERMS

Bake – To cook by dry heat, usually in the oven.

Barbecue – To roast meat slowly on a spit over coals, or in the oven, basting with a highly seasoned sauce. The term is popularly applied to foods cooked in or served with barbecue sauce.

Baste – To spoon liquid over a product during baking.

Beat – To make a mixture smooth or to introduce air by using a brisk, regular motion that lifts the mixture over and over.

Blanch – To preheat in boiling water or steam. (1) Used to inactivate enzymes and prepare food for canning, freezing, and drying. Vegetables are blanched in boiling water or steam, and fruits in boiling fruit juice, syrup, water, or steam. (2) Used to aid in removal of skins from nuts, fruits, and some vegetables.

Blend – To mix two or more ingredients until smooth and uniform.

Boil – To cook in water or a liquid mostly water in which bubbles rise continually and break on the surface. The boiling temperature of water at sea level is 212°F.

Braise – To cook slowly in a covered utensil in a small amount of liquid or in steam. (Meat may or may not be browned in a small amount of fat before braising).

Bread – To coat with bread crumbs, or a mixture of beaten egg and milk, then crumbs.

Broil – To cook under or over direct heat, in a broiler, or over coals.

Candy – To cook in sugar or syrup when applied to sweet potatoes and carrots. For fruit, fruit peel, or ginger, to cook in heavy syrup until plump and transparent. Product is also known as crystallized fruit or fruit peel.

Caramelize – To melt sugar slowly over low heat until it becomes brown in color.

Chop – To cut in pieces with knife, chopper, or scissors.

Cream – To work one or more foods until soft and creamy, using a spoon, wooden paddle or other implement. Applied to fat and sugar in place of blend.

Cut In – To mix shortening with dry ingredients, with pastry blender, knives, or fork.

Dice – To cut into cubes of uniform size and shape (small cubes).

Dissolve – To cause a dry substance (often sugar) to pass into solution in a liquid.

Dredge – To sprinkle or coat with flour or other fine substance.

Fold In – To combine a new ingredient with a mixture that has been beaten until light, by cutting vertically through the mixture and turning over and over by sliding the implement across the bottom of the mixing bowl with each turn.

Fricassee – To cook by braising; usually applied to fowl or rabbit.

Fry – To cook in fat. Cooking in a deep layer of fat is called deep-fat frying.

Glaze or Glace – To coat with a thin sugar syrup cooked to the crack stage; mixture may be thickened. Or to cover with a thin coat of icing.

Grate – To rub on a grater that separates the food in various sizes of bits or shreds.

Grill – To cook under or over direct heat.

Grind – To reduce to particles by cutting, crushing, or grinding.

Knead – To work and press dough with the palms of the hands.

Marinate – To allow a food to stand in a liquid (marinade) usually French dressing or a mixture of oil and vinegar, to soften or add to the flavor.

Melt – To liquefy by using heat.

Mince – To cut or chop food into extremely small pieces.

Mix – To combine ingredients, usually by stirring.

Pan-broil – To cook *over* direct heat, usually in a fry pan, uncovered, pouring off fat as it accumulates.

Pan-fry – To cook in a small amount of fat.

Parboil – To boil until partially cooked. The cooking is usually completed by another method.

Pare – To strip off the outside covering.

Poach – To cook in a hot liquid using precaution to retain shape.

Pot roast – A term applied to cooking larger cuts of meat by braising.

Roast – To cook uncovered, by dry heat, usually in an oven.

Sauté – To brown in a small amount of fat.

Scald – To heat milk to just below the boiling point. To dip certain foods in boiling water (see Blanch).

Scallop – To bake a food usually in a casserole with sauce or other liquid. Crumbs are often sprinkled over.

Score – To cut narrow grooves or gashes part way through the outer surface of food.

Sear – To brown very quickly by intense heat. This method increases shrinkage but develops flavor and improves appearance.

Shred – To cut or tear in small, long, narrow pieces.

Sift – To put one or more dry ingredients through a sieve or sifter, for the purpose of mixing or lightening.

Simmer – To cook in a liquid just below the boiling point, at temperatures of 183°F. to 210°F. Bubbles form slowly and collapse just below the surface.

Steam – To cook in steam with or without pressure. The steam may be applied directly to the food, as in a steamer or pressure cooker.

Steep – To allow a substance to stand in liquid just below the boiling point for the purpose of extracting flavor, color, or other qualities.

Sterilize – To destroy microorganisms by boiling, dry heat, or steam.

Stew –To simmer slowly in a small amount of liquid for a long time.

Stir – To mix ingredients with a circular motion until well blended or uniform consistency.

Toss – To mix ingredients lightly.

Truss – To tie fowl or other meat with metal or wooden pins (skewers) to hold its shape during cooking.

Whip – To beat rapidly to incorporate air and produce expansion, as in heavy cream or egg whites.

STUDENT WORKSHEET

Becoming Acquainted With Cookbooks **Name** _____

Select two different cookbooks. Scan them first, then answer the following:

Title, Cookbook #1, Publisher **Title, Cookbook #2, Publisher**

1. Is there an index, if so, where is it located? Is it adequate?

2. Is there a table of contents? How is the book divided?

3. What kind of baking powder is called for in each book?

4. Is there a list of substitutions for emergencies (ex. how to substitute cocoa for chocolate, how to make sour milk)?

5. Are there illustrations of procedures and/or end products? Is the book nicely illustrated?

6. Are the recipes easy to read and follow, or are they confusing? Do the recipes give the approximate yields?

7. Does each book contain basic, standard recipes as well as a good assortment of unusual or specialty recipes?

8. List any other features that you feel are especially good about each.

9. List any features that you feel are especially poor about each book.

HIDDEN WORD PUZZLE

A Q P E U C E B R A B A U V W X Y C U C

I D Q I B S M P H S N D N I R G Y I U I

S L R R H E S A I O T S R N O H L T R S

T H O E V W A N N I F F E R A T I S P U

I D A T D S C F C K I T Z O N N N O O T

D B A K E G R R Z N S R E A Z A A A T Z

D M L L E T E Y I A A U V S A C N D R B

O S S O T H G J B L M S B T H E D A O R

D J E I W S K A F Z E S R A U E B V A E

I E E S S A C I R F S E A R R Z S O S A

S K S L I O B P P H I O I H L A S T T D

S L N N O Q G W O E C E S T E L I M E K

O M T L K N R O L V K N E A D G V E I M

L R I T S O I V L E T P O T E D T K E C

V I A O M K L F A S I S D O R M E L T L

E L S L O E L R C A L I O R B F Y S I O

E S M I X Z A N S W H T M I S C O R E A

Directions: The puzzle above contains twenty-eight food terms. Clues to help you find these words appear on the following page.

PUZZLE CLUES

1. Three words that mean to cook directly over or under heat *(broil)* *(barbecue)* *(grill)* .

2. To spoon liquid over a product during roasting *(baste)* .

3. Five terms which involve cooking with water or liquid *(boil)* *(braise)* *(fricassee)* *(pot roast)* *(poach)* .

4. Two words meaning to cook by dry heat in an oven *(bake)* *(roast)* .

5. Two terms found in biscuit recipes, one meaning to distribute fat throughout the dry ingredients, the other meaning to work dough with the hands *(cut in)* *(knead)* .

6. Two terms which tell what you might do to chicken or fish before frying it *(bread)* *(dredge)* .

7. Three things you might do to or with sugar *(dissolve)* *(glaze)* *(melt)* .

8. To reduce to fine particles *(grind)* .

9. Three things you might do to vegetables in a salad *(mix)* *(toss)* *(shred)* .

10. To cook in a small amount of fat *(pan fry)* .

11. To bake in a casserole, as potatoes *(scallop)* .

12. To cut grooves in meat *(score)* .

13. To brown using intense heat *(sear).*

14. What is done to dry ingredients to mix them and to incorporate air *(sift)* .

15. To mix ingredients with a circular motion *(stir)* .

QUIZ I – CULINARY TERMS

Name _____

Matching. Place the letter of the appropriate match in the space at the left of the term.

(h)	bake	a. To immerse in boiling water to remove the skins easily.
(b)	barbecue	b. To cook on a spit or over charcoal, basting with a seasoned sauce.
(a)	blanch	c. let stand in a liquid mixture to flavor and tenderize
(f)	boil	d. coat with flour or bread crumbs.
(g)	braise	e. cover with a thin coat of icing.
(d)	dredge	f. cook in water at 212°F, bubbles breaking at the surface.
(c)	marinate	g. cook in liquid slowly, covered, for a long period of time.
		h. cook by dry heat in an oven.

Use the terms in the list below to fill in the blanks.

braise
bread
broil
boil
caramelize
cream
cut in
fold in
fricassee
knead

1. Which three are methods of cooking food in liquid?
   (braise) *(boil)* *(fricassee)*

2. Which two are part of the instructions in making biscuits?
   (cut in) *(knead)*

3. Which two are methods of blending shortening with other ingredients? *(cut in)* *(cream)*

4. Which word tells what happens to sugar when it melts and is responsible for the brown crust on cakes? *(caramelize)*

5. Which means cooking by direct heat and is used in the preparation of tender meats? *(broil)*

6. Which is the direction used in the preparation of souffle' and angel food or chiffon cakes? *(fold in)*

QUIZ II – CULINARY TERMS

Name _____

Matching. Place the letter of the appropriate match in the space at the left of each term.

(e)	pan broil	a. braise, usually larger cuts of meat.
(a)	pot roast	b. cut into narrow strips.
(c)	sauté	c. brown quickly in a small amount of fat.
(f)	scald	d. brown (meat) by using intense heat to develop flavor and improve appearance.
(d)	sear	e. cook over direct heat, pouring off fat as it accumulates.
(g)	simmer	f. bring liquid, usually milk, to a point just below the boiling point, (to destroy enzymes).
		g. to cook in a liquid just below the boiling point.

Use the terms in the list below to fill in the blanks.

mince
parboil
poach
scallop
score
steep
truss

1. Which would you do to garlic? *(mince)*
2. A method of cooking foods in a casserole in the oven, usually with a white sauce. *(scallop)*
3. Which is a method of cooking eggs? *(poach)*
4. Which term might you expect to see in connection with the preparation of poultry? *(truss)*
5. Which two processes are done with a knife? *(score)* *(mince)*
6. Which is a way of preparing the outside of ham for a more attractive appearance? *(score)*
7. Which refers to a method of extracting flavors or colors? *(steep)*
8. Which would be followed by a second method of cooking, such as baking stuffed peppers, frying potatoes, etc.? *(parboil)*

QUIZ III – CULINARY TERMS

Name _____

Matching.

(f)	blanch	a. to use intense heat for browning as with a roast.
(d)	braise	b. to coat with flour.
(i)	cream	c. to chop very finely.
(b)	dredge	d. to cook slowly for a long period of time in water, covered.
(e)	marinate	e. to let stand in a seasoned liquid for the purpose of adding flavor or tenderizing.
(c)	mince	f. to dip into boiling water to make the removal of the skin easier.
(j)	parboil	g. to tie poultry before roasting it.
(n)	sauté	h spoon liquid over food as it cooks.
(k)	scald	i. to work shortening until it is light and fluffy; to blend ingredients with shortening by beating.
(m)	score	j. cook in water before cooking by a second method.
(a)	sear	k. bring just to the boiling point for the purpose of destroying enzymes.
(g)	truss	l. to cook over direct heat, pouring off fat as it accumulates.
		m. to cut grooves or slashes on the surface of food.
		n. to fry quickly and lightly as for onions, meat strips or mushrooms.

Fill in

braise
caramelize
chop
cut in
dice
fold in
fricassee
knead
scallop
steep
stew

1. Which refers to the melting of sugar? *(caramelize)*
2. Which means to cut into small cubes? *(dice)*
3. Which two might you do to celery or carrots before adding them to the soup? *(dice)* *(chop)*
4. Which three refer to cooking slowly in water, but are used according to the kind of meat being prepared? *(braise)* *(fricassee)* *(stew)*
5. Which process forms longer strands of gluten in pastry or dough? *(knead)*
6. Which is a step in the preparation of tea? *(steep)*
7. Which is a method of cooking potatoes in the oven? *(scallop)*
8. Which might you see in connection with the use of whipped cream in a recipe? *(fold in)*

UNIT 5 – MEASURING – ENGLISH SYSTEM

Objectives: Upon completion of this unit the student will

Measure ingredients including shortening, flour, and sugars with a high degree of accuracy using standard (English) measuring utensils.

Weigh ingredients accurately using an ounce scale.

Calculate the measurements for increasing and decreasing recipes accurately.

Lessons

1. Using the worksheet "Measuring Ingredients", demonstrate the procedure for accurately measuring flour, granulated sugar, brown sugar, confectioner's sugar, shortening, and liquids.

2. Students practice measuring techniques.

3. Demonstrate the use of the portion scale:

   a. Place the container on the scale.
   b. Set the pointer on zero.
   c. Fill the container and place on the scale. The pointer should now indicate the net weight or the weight of the contents of the container.

4. Using the measuring and weighing skills sheet, have students measure ingredients, then weigh the amounts using the portion scale.

5. Using the Measuring Calculations Worksheet and the chalkboard or overhead projector go over basic information and calculations.

   Samples:

   a. $\frac{1}{2} \times \frac{1}{4}\text{ c} = \frac{1}{8}\text{ c}$

   $\frac{1}{8}\text{c} = \frac{1}{\cancel{8}_{1}} \times \cancel{16}^{2}\text{T} = 2\text{T}$

   b. $\frac{1}{2} \times \frac{1}{3}\text{c} = \frac{1}{6}\text{c}$

   $\frac{1}{6} \times 16\text{T} = 2\frac{2}{3}\text{T}$

   $2\frac{2}{3}\text{T} = 2\text{T} + \frac{2}{3}\text{T}$ or $2\text{T} + \frac{2}{3} \times 3$ tsp.

   $2\text{T} + \frac{2}{3} \times 3$ tsp. $= 2\text{T} + 2$ tsp.

Additional Activities:

1. Have students estimate amounts of ingredients, then measure to determine accuracy of estimations.

2. Measure the number of tablespoons in a cup, teaspoons in one tablespoon. This may be done prior to the lesson on calculating measures.

3. Arrange for and take a field trip to a local supermarket. Have the produce manager, or delicatessen manager or butcher explain the use of scales in their work. Obtain a commercial-type scale; have students read and interpret weights.

4. Have students halve, double and calculate other multiples of recipes for practice.

References:

Cote, Patricia. *People, Food, and Science,* Lexington, Massachusetts: Ginn and Company, 1972.

Medved, Eva. *The World of Food,* Lexington, Massachusetts: Ginn and Company, 1970, Chapter 4.

Pollard, L. B. *Experiences with Foods,* Lexington, Massachusetts: Ginn and Company, 1968, Unit 9.

STUDENT LAB SHEET

Measuring Ingredients **Name** _____

1. The sizes included in a set of standard measuring cups are:

   (1 c. 1/2 c. 1/3 c. 1/4 c.)

2. The sizes included in a set of standard measuring spoons are:

   (1 T. 1 tsp. 1/2 tsp. 1/4 tsp.)

3. What are the differences between "dry" measuring cups and cups used for measuring liquids?

Dry Measure	Liquid Measures
(cup line at the top)	*(pouring spout)*
(plastic or metal)	*(cup line below top for transfer)*
	(often glass)

4. How should liquids be measured?

   (eye level on a steady surface)

   (bottom of meniscus on the line)

5. How is shortening measured? Name 3 methods.

   a. *(Pack into the cup)*

   b. *(By weight – 8 oz. = 1 c.)*

   c. *(Water displacement. For 1/3 c. shortening, put 2/3 c. water in cup, submerge shortening until water reaches 1 c. level.)*

6. How is flour measured?

   a. *(By weight: 1 c. all purpose flour = 4 oz.)*

   b. *(Sift, then measure)*

   c. *(Dip, level, pour.)*

7. How should the following ingredients be measured?

   Granulated sugar – *(Dip – level – pour)*

   Brown sugar – *(Pack)*

   (Confectioner's sugar – *(Sift, then measure)*

   Salt – *(Use wide mouth container for storing; use level measures.)*

   Baking powder – *(Same as salt. 3 tsp. = 1 T.)*
   Soda, Spices

8. When is accuracy essential? *(Accuracy is essential if you want the same results as the tested recipes yield, when following a recipe for the first time, and when the balance of ingredients and seasonings is a delicate one.)*

When may estimated amounts be used? *(often for toppings or in seasoning foods to taste; when varying a recipe to suit personal preference; when the balance of the proportions will not be disrupted.)*

STUDENT LAB SHEET

Measuring and Weighing Skills Name _____

Name	Ingredient	Amount	Method	Wt.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				

STUDENT LAB SHEET

Measuring – Calculations Name _____

I. Basic Information

Abbreviations: teaspoon – t or tsp.
tablespoon – T or tbsp.
cup – c.

Standard measures:

cups – dry: 1 cup; 1/2 c.; 1/3 c.; 1/4 c.
spoons: 1T.; 1 tsp.; 1/2 tsp.; 1/4 tsp.

(3) tsp. = 1 T. *(2)* c. = 1 pt.

(16) T. = 1 c. *(2)* pts. = 1 qt.

(8) fluid oz. = 1 c. *(16)* oz. = 1 lb.

Butter or margarine: 4 sticks = 1 lb. = 2 c.

II. Practice: Answers should always be in the best form for measuring.

2 X 5 T = *(½ c. + 2 T.)*

2 X 1½ tsp. = *(3 tsp. or 1 T)*

2 X ¾c. = *(1½ c.)*

1½ X ¾c. = *(1 c. + 2 T)*

1½ X 2 tsp. = *(3 tsp. or 1 T)*

Take ½ of the following quantities:

½ c. =	*(¼ c.)*	1/3 c. =	*(2 T + 2 tsp.)*
¼ c. =	*(2 T)*	1½ c. =	*(¾ c.)*
1 T. =	*(1½ tsp.)*	¼ tsp. =	*(1/8 tsp. – dash)*
¾ c. =	*(¼ c. + 2 T)*	1½ tsp. =	*(¾ tsp.)*

III. The proportion for substituting all purpose flour for cake flour is as follows:

7/8 c. all purpose flour = 1 c. cake flour.

Calculate:

7/8 X 3½ c. = (3 c. + 1 T)

QUIZ – MEASURING

Name _____

1. Name the measures given in a standard set of measuring cups.

   (1c.) *(½ c.)* *(1/3 c.)* *(¼ c.)*

2. Another way to measure 10 T = *(½ c. + 2 T)*

3. ½ X 1/3 c = Ans. *(2 T +2 tsp.)*

4. ½ X 1 T = Ans. *(1½ tsp.)*

5. 7/8 X 1½ c = Ans. *(1 c. + 5 T)*

QUIZ – MEASURING

Name _____

1. Name the measures given in a standard set of measuring spoons.

   (1 T) *(1 tsp.)* *(½ tsp.)* *(¼ tsp.)*

2. Another way to measure 12 T = *(¾ c.)*

3. ½ X 3/4 c = Ans. *(¼ c + 2 T)*

4. ½ X 3 T = Ans. *(1 T + 1½ tsp)*

5. 7/8 X 2½ c = Ans. *(2 c + 3 T)*

UNIT 6 – INTRODUCTION TO METRIC MEASURING

Objectives: Upon completion of this unit the student will:

Evidence an awareness of the metric system of measuring.

Practice using metric measures accurately.

Demonstrate an understanding of the concept of proportions by creating and testing recipes in metric measures, based upon proportions.

Lessons:

1. Distribute the Metric Worksheet. Have students complete the worksheet to use for future reference. (Student responses are in parentheses).

2. Use demonstrations, overhead transparencies and/or filmstrips (example: Eye Gate Series, *Thinking Metric,*) to assist students in completing the worksheets.

3. Students examine packaged foods for metric labeling. List their findings on the worksheet. Point out the need to *think* metric, rather than convert English measures to metric. This exercies is for the purpose of familiarizing the student with existing English and Metric measures in commercial foods.

4. Discuss and demonstrate the concept of proportions in developing recipes. Using elementary examples prepare recipes in metric, using proportional quantities.

Example A: Metric Fruit Salad

Proportion	English	Metric	Ingredient
1 part	1 c	250 ml	crushed pineapple
1 part	1 c.	250 ml	miniature marshmallows
1 part	1 c.	250 ml	mandarin oranges
1 part	1 c.	250 ml	sour cream
1 part	1 c.	250 ml	cooked rice or coconut

Combine and chill 24 hours. Yield 1250 ml

Example B: Metric Punch

Proportion	English	Metric	Ingredients
16 parts	4 c.	1 liter	cranberry juice
12 parts	3 c.	750 ml	pineapple juice
1 part	¼ c.	62.5 ml	lemon juice
12 parts	3 c.	750 ml	ginger ale

Combine and chill. Yield: 2.5625 liters

5. **Measuring practice.** Have students estimate the metric measure and determine the mass or the volume of a variety of foods used in food preparation. Use the chart found in the worksheet for recording the session.

Additional Activities:

Students work out proportions and create recipes.

Evaluation:

Worksheet
Participation and progress with practice

METRIC WORKSHEET

1. Why do we measure things? *(Unless measures are used, products are not standard or uniform and may be subject to considerable variation.)*

2. What is meant by a standard measure? *(A standard measure has been established for use by many people. Standard measures provide consistency in communicating amounts such as those found in recipes. Measuring utensils are sold in standard sizes to facilitate uniformity in measuring ingredients)*

3. What is a proportion? *(A proportion consists of the quantities of ingredients as they relate to each other. Recipes are balanced proportions. For example, a cake may consist of 1 part flour, 3 parts sugar, and 3 parts egg white; this would be expressed in the English system as ½ c. flour, 1½ c. sugar, and 1½ c. egg whites.)*

4. What is the metric system of measurement? *(It is a standard system of measuring which is based on units of 10. It is widely used throughout the world. The central unit of the metric system is the gram:*

   One gram of water is equal to one cubic centimeter, which is equivalent to one milliliter.)

5. Metric equivalents:

   Length

1 meter	=	10 decimeters
1 decimeter	=	10 centimeters
1 centimeter	=	10 millimeters
1000 meters	=	1 kilometer

   Problems:

   a. How many centimeters equal one meter? *(100)*

   b. 32.4 centimeters = *(32)* centimeters and *(4)* milliliters.

   Volume – Liquid Measures

1 liter	=	10 deciliters
1 deciliter	=	10 centiliters
1 centiliter	=	10 milliliters
1000 liters	=	1 kiloliter

   Problem: How many milliliters equal 1 liter? *(1000)*

Mass

1 gram	=	10 decigrams
1 decigram	=	10 centigrams
1 centigram	=	10 milligrams
1000 grams	=	1 kilogram
1000 kilograms	=	1 metric tonne

Problem: How many milligrams equal 1 gram? *(1000)*

Temperature – Celsius

English		Celsius
250°F	warm oven	121°C
350°F	moderate oven	176°F
400°F	hot oven	203°C
450°F	very hot oven	233°C

6. Compare and list the English and Metric labeling on several packages of commercially produced food.

Product	English Measure	Metric Label
Milk		
Canned Peaches		
Cereal		
Raisins		
Ketchup		
Margarine		

7. Measure a variety of substances using metric measures. Practice by estimating amounts first.

Substance	Estimated Measure	Actual Metric Measure
Salt		
Sugar		
Flour		
Milk		
Margarine		
Walnuts		
Potatoes		

Resources:

Kim, Margaret and Hedy Knauer. *Metricook: Recipes in Metric Measure for the Student Chef,* Los Angeles, Ca.: Metricraft TM Inc., Gallery Books, 1974.

Montagne, Prosper. *Larousse Gastronomique,* U.S.A.: Crown Publishers, Inc. 1961.

Waldo, Myra. *Intercontinental Gourmet Cookbook,* New York: MacMillan, 1967.

UNIT 7 – CALCULATING COSTS OF PRODUCTS – ENGLISH SYSTEM

Objectives: Upon completion of this unit the student will:

Calculate unit prices of food items

Compute prices of units of measures commonly used in food preparation

Compute prices of products accurately

Lessons:

1. Distribute student worksheets. Calculate the costs of flour in Problem 1. Assign a student or students to obtain the prices of flour in weights of 5 pounds, 10 pounds, and 25 pounds. Calculate Problem 2 and answer remaining questions based on current prices. Use group work, chalk board, and overhead projector.

2. Using worksheet entitled "Current Costs of Staples for Calculating Costs of Products" calculate the unit prices of staple food items. Take field trip to the market, assigning students specific items to price; or have students obtain prices as an assignment. Retain lists for future reference and up-dating.

3. Mention additional costs in food preparation:

   Labor
   Equipment costs, materials
   Fuel
   Overhead

Additional Activities:

1. Students research costs involved in a food service industry.

2. Using industrial arts department as resources, students research method and compute fuel costs in baking.

Evaluation:

Quiz
Students calculate costs of items prepared in class.

STUDENT LAB SHEET

Current Cost of Staples for Calculating Costs of Products Name _____

Date _____

Item	Wt. of Pkg.	Cost of Pkg.	Equivalent	Cost Per Unit
Flour – all purpose				
Flour – cake				
Flour – whole wheat				
Flour – instantized				
Sugar – granulated				
Sugar – confectioners				
Sugar – brown				
Molasses				
Corn Syrup				
Shortening				
Oil				
Margarine				
Butter				
Eggs – large				
Eggs – medium				
Milk – whole				
Milk – non-fat dry				
Milk – evaporated				
Milk – condensed				
Baking powder				
Baking soda				
Yeast				
Raisins				
Walnuts, shelled				
Dates				
Vinegar – cider				
Vinegar – wine				
Vinegar – tarragon				
Chocolate – baking				
Chocolate morsels				
Cocoa				

TABLE OF WEIGHTS AND MEASURE

2 cups butter	= 1 pound
4 cups flour	= 1 pound
2 cups granulated sugar	= 1 pound
2 2/3 cups powdered sugar	= 1 pound
3½ cups confectioners sugar	= 1 pound
2 2/3 cups brown sugar	= 1 pound
1 7/8 cups rice	= 1 pound
1 square cooking chocolate	= 1 ounce
1½ cups baking powder	= 12 ounces
1 cup walnut meats	= 12 ounces
8 fluid ounces	= 1 cup
32 fluid ounces	= 1 quart

STUDENT LAB SHEET

Calculating Costs **Name** _____

Practice . . . . .

1. Figure the price per pound in each of the following quantities of flour. (Prices are not actual or current).

	Price per pound
5 lb. bag flour – $ .88	*($1.76)*
10 lb. bag flour – $1.65	*($.165)*
25 lb. bag flour – $3.23	*($.129)*
50 lb. bag flour – $5.54	*($.110)*

2.. Find out the current prices for the following: Figure cost per pound.

5 lb. bag flour – $	_____
10 lb. bag flour – $	_____
25 lb. bag flour – $	_____
50 lb. bag flour – $	_____

3. Examine the figures in #2. What conclusion do you draw about sizes of flour?

4. At the prices in #1 how much would you have to pay for a 10 lb. bag of flour if it sells for the same price per pound as flour in a 50 lb. bag?

amount *($1.10)*

At the prices in #2? amount _____

5. How much are you paying for 25 lbs. of flour if you were to buy it in 5 lb. bags at the prices in #1.? amount *($4.40)*

At the prices in #2? amount _____

6. One cup of flour called for in a recipe weighs 4 ounces. How many cups of flour equal one pound? *(4)*

What is the price per cup of flour from a 25 lb. bag as in # 1? *($.03)*

What is the price per cup of flour from a 25 lb. bag as in # 2? _____

SAMPLE

QUIZ – Measuring and Calculating Costs Name

Part 1. Take one half of the following quantities. Be sure the answers are in *measurable* quantities.

	Answers
1¾ c flour	*(3/4 c + 2 T)*
1/3 c shortening	*(2T + 2 tsp)*
1/4 c sugar	(2T)
3 T milk	(1 T + 1½ tsp)

Bonus Part I.

7/8 of 3½ c = *(3 c + 1 T)*

Part II. Complete the following chart by calculating the unit prices.

Product	Quantity	Cost of Pkg.	Equivalent	Unit Price
eggs	1 doz.	$ .89	12 = 1 doz.	*($.074)* per egg
chocolate	8 oz.	.83	1 sq. = 1 oz.	*($.10)* per square
flour	25 lbs.	4.35	4 c = 1 lb.	*($.043)* per cup
milk	1 gal.	1.26	4 c = 1 qt.	*($.078)* per cup
margarine	1 lb.	.59	2 c = 1 lb.	*($.295)* per cup
shortening	3 lb.	1.89	2 c = 1 lb.	*($.315)* per cup
granulated sugar	5 lb.	2.15	2 c = 1 lb	*($.215)* per cup

Part III. At the prices above what would the following quantities cost?

3 1/3 c flour	*($.13)*
3/4 c sugar	*($.16)*
4 squares chocolate	*($.40)*
2½ c milk	*($.195)*
1½ c margarine	*($.42)*
4 eggs	*($.296)*

UNIT 8 – QUICK BREADS

Objectives: Upon completion of the unit the student will

prepare a variety of quick breads according to acceptable standards.

Explain the functions of ingredients in the products being prepared.

Handle batters and doughs according to instructions.

Conduct a comparative study.

Topics:

A. Ingredients Used in Baking
B. Biscuits – Doughs
C. Muffins – Batters
D. Quick Bread Summary

Topic A – Ingredients Used in Baking

Objectives: The student will name several ingredients used in baking and indicate what their functions are in baked products.

Lessons

1. Distribute Biscuit lab sheets and worksheet entitled "Ingredients Used in Baking." Establish objectives.

2. Show filmstrip "Better Biscuits" from the Betty Crocker Series or an equivalent. After filmstrip, review the functions of ingredients in biscuits.

3. Discuss and demonstrate, where possible, the functions of ingredients in baking (See chart)

Additional Activities:

Students prepare foods experimentally, leaving out some ingredients to determine the effects.

Topic B – Biscuits – Doughs

Objectives: The student will prepare biscuits according to directions and achieve products of uniform and acceptable quality.

Lessons:

1. Discuss the standards of quality for biscuits.

2. Demonstrate the preparation of biscuits, defining terms and reinforcing uses of ingredients.

3. Students prepare basic baking powder biscuits. Repeat until product meets standards of acceptability and uniformity.

4. Students prepare variations using biscuit dough, as, cheese biscuits, cinnamon rolls, butterscotch rolls.

5. Demonstrate variety of uses of refrigerated biscuits.

    a. Bread sticks baked in butter – add caraway seeds, or poppy seeds.

    b. Bake biscuits in pan spread with butter, brown sugar, raisins, nuts and corn syrup (2 T. each) turn upside down as coffee cake.

    c. Fry biscuits in deep fat, making holes in centers. Roll in sugar or dip in orange and confectioner's sugar glaze.

QUICKBREADS – BISCUITS

Objectives: Work with dough to produce product of proper consistency

Follow instructions accurately

List ingredients and their functions

Menus: List a few ways to use biscuits with meals.
(Students create ideas)

Recipes: Biscuits, variations

Related Information:

1. Ingredients used in baking

2. Standards for quality

   a. Flavor – mild, pleasant, no bitterness.
   b. Texture – creamy, smooth, "Sheets" in layers in center. Crust tender.
   c. Appearance – uniform, lightly browned outside, white inside.
   d. Evenly raised.

3. Vocabulary

   cut in *(Mix shortening with dry ingredients – using knives, pastry blender, or hands.)*

   knead *(Work dough with hands to mix and develop gluten)*

   pastry blender *(Wire utensil used for cutting in)*

4. What is the substitution for sour milk or buttermilk?
   (Students research in emergency substitutions in cookbooks.)

5. Name as many uses as you can think of for refrigerated biscuits.

   (Students list as exercise in creativity: doughnuts, coffee cake, bread sticks, topping for cobbler – pigs in blankets)

INGREDIENTS USED IN BAKING

Complete the chart, using as much information as you can locate about each product. Give illustration of examples where practical.

Ingredient	Use or Purpose
Flour – *(all purpose)* *(cake)* *(rye, whole wheat)*	*(forms the basic structure or framework)*
Liquid *(water, milk, juice)*	*(develops gluten when added to flour and therefore helps form framework; moistens; activates some leavening agents.)*
Leavening agents, Leaveners Baking soda + *(acid as vinegar or buttermilk.)*	both are chemicals which produce CO_2. *(yeast breads)* *(Quick breads as muffins, biscuits)*
Baking powder *(= baking soda + acid)*	
Yeast *(a plant which grows and produces gas.)*	
Air – *(beaten egg whites)*	*(mechanical – some cakes, some pancakes)*
Steam	*(cream puffs, popovers)*
Shortening *(oil, margarine, butter, lard)*	*("Shortens" strands of gluten, making a more tender product.)*
Eggs	*(add richness and flavor, tenderness, color. When beaten egg whites are used, act as a leavening agent.)*
Cream of tartar *(an acid powder from grapes)*	*(Used in manufacture of baking powder.)* *(In beaten egg whites, strengthens them to withstand oven heat.)*
Vinegar	*(Used as acid in some products when combined with baking soda.)*
Salt	*(Brings out flavor in yeast breads, controls growth.)*

Topic C – Muffins – Batters

Objectives: The student will prepare muffins according to uniform and acceptable standards.

Lessons:

1. Show filmstrip "Muffin Making" from Betty Crocker Series or equivalent.
2. Demonstrate the preparation of muffins.
3. Students prepare muffins and evaluate them. Repeat if necessary.
4. Students browse through cookbooks to find products classified as quickbreads, variations of muffins.

STUDENT LAB SHEET

Muffins **Name** _____

Objectives: Work with batter.
Identify principles of working with quickbreads.

Menus: Plan a menu for breakfast and one for lunch or dinner using muffins as the bread.

Breakfast	**Lunch or Dinner**
(Students develop)	

Related Information:

1. What are the differences between muffins and biscuits?

   (muffins – eggs – sugar – use batter – golden in color – cake-like)

   (biscuits – no eggs – no sugar – use dough – off-white – flaky – more like pastry)

2. What are the standards for good quality muffins?

   Appearance *(high – gently rounded pebbled top)*

   Flavor *(pleasant, bland)*

   Texture *(smooth, moist inside, delicate crust)*

3. What are some variations of muffins?

   (blueberry) *(jelly)* *(raisin)*

   (cheese) *(bacon)* *(crumb topping)*

4. List several products classified as quickbreads.

   (pancakes) *(corn bread)* *(muffins)*

   (waffles) *(biscuits)* *(Date-nut bread)*

5. What are the most important precautions in preparing muffins?

6. Vocabulary:

   gluten *(elastic substance resulting when flour and water are combined)*

   dough *(mixture which is low in liquid content – can be worked and shaped)*

   batter *(high liquid content, can be poured)*

   leavener, leavening agent *(causes product to rise)*

Topic D – Quickbread Summary

Objectives: The student will prepare and sample a variety of quickbreads by acceptable standards.

The student will calculate the cost of products prepared.

The student will compare several kinds of maple syrup products.

The student will analyze and compare recipes and products.

The student will cite directions for and prepare bacon of high quality.

Lessons:

1. Students review foods classified as quickbreads. Select and prepare and sample each of the following products: rosettes, fritters, popovers, pancakes, corn bread, waffles. Prepare bacon, also.

2. Student demonstration. Prepare waffles – for each waffle use a different syrup:
   100% pure maple
   maple blend
   imitation blend
   homemade: 2 parts sugar (1 c.), 1 part boiling water (1 c.), few drops maple flavoring.

   Conceal labels until after each is sampled. After sampling is complete, chart identity and prices as well as ingredients on the chalkboard. Conclusions should be with reference to – is there a difference in flavor and preference, and was preference related to cost?

3. Students study independently to compare recipes, derive definitions and complete the laboratory assignment.

4. Discuss the care of waffle irons and grills and other seasoned surfaces.

   a. Do not soak.
   b. If necessary, restore by rubbing grease over or into surface.
   c. If pan loses its seasoning it rusts, and foods stick.

Evaluation:

Quiz
Student participation and performance.

STUDENT LAB SHEET

Quick Bread Name _____

Objectives: Discover variety of quick breads.

Improve upon study skills

Prepare a product successfully, concentrating on uniformity and pride in the finished appearance.

Menu Planning:

Plan a menu for each of three items sampled in class or using three different quick breads.

(Students create)

Recipes: Copy and attach the recipe you use in class. Prepare the recipe from the copy you made to test it for accuracy.

Related Information:

1. Vocabulary. In some cases you will have to derive a definition or description by reading the recipe through carefully.*

Rosette (Example – light crispy decorative quick bread made by dipping an iron into thin batter and then into hot fat. Dusted with sugar and served as dessert.)

Timbale case _____

_____

Fritter _____

_____

Popovers _____

_____

Yorkshire pudding _____

_____

*Note: Students derive definitions by stating classification, predominant flavor, use, and special notes on preparation.

2. What was the cost of the item you prepared?

Item prepared _____

Ingredient	Amt. Used	Cost/Pkg.	Wt./Pkg.	Unit Price	Total
flour					
eggs					
sugar					
milk					
shortening					

3. Look up the directions for preparing bacon in two different cookbooks. What did you find? Summarize.

4. Comparative study – Syrup

Product brand	Price	Weight	Price per ounce	Contents by %	Comment
1.					
2.					
3.					
4.					
5.					

Conclusions:

5. Chart the proportions of ingredients in each of the following quick breads, (use one cookbook as your source) by writing in the amount of each ingredient called for in the basic recipe.

	Flour	Liquid	Eggs	Fat (oil – shortening	Sugar	Baking Powder	Soda	Salt	Comment
Biscuits									dough – not sweet
Muffins									batter
Pancakes									batter thick
Waffles									batter
Crepes									batter thin
Coffee Cake									batter thick
Rosettes									batter thin – no flavoring
Fritters									batter dough
Popovers									batter thin – no leavener! not sweet

6. Compare the recipe for popovers with a recipe for Yorkshire Pudding.

Popovers | **Yorkshire Pudding**

What is your conclusion?

(They are the same, prepared and served differently.)

7. Compare the recipe for biscuits with a recipe for dumplings.

Biscuit | **Dumplings**

What is your conclusion? *(They are basically the same.)*

8. Why is baking soda used in Pumpkin Bread, Shoo-fly Coffee Cake, pancakes, and waffles? *(Acid is one of the ingredients in each case, e.g., vinegar, molasses, sour milk.)*

QUIZ – QUICK BREADS

Name _____

1. 1/2 of 3/4 c = *(1/4 + 2 T)*
2. What two things happen when a pan loses its seasoning? *(rusts; food sticks)*
   How can it be restored? *(rub with shortening, or apply salt and heat)*
3. Use the items in the left column to fill in the correct answers.

Crepes
Biscuits
Fritters
Pancakes
Muffins
Rosettes
Timbale Cases
Yorkshire pudding
Popovers
Waffles
Scotch shortbread

1. Which quick bread is made using dough? *(Biscuits)*
2. Which three are fried in deep fat? *(Fritters) (Timbale cases) (Rosettes)*
3. Which two are leavened by steam? *(Popovers) (Yorkshire pudding)*
4. Thin batter fried using a special iron and served as a dessert or snack? *(Rosette)*
5. Thin delicate French pancakes filled with food or served with a sauce *(Crepes)*
6. Fruit or food surrounded with batter and deep fried *(Fritter)*

7. What precaution in the preparation of biscuits is given to make sure that the product is tender? *(Do not over-mix).*
8. What three ingredients contribute to the formation of structure in quick breads? *(flour) (water) (eggs)*
9. If five pounds of granulated sugar cost $1.69 and two cups of sugar equal one pound, how much does one cup of sugar cost? *16.9¢*
10. What is your assigned job in the lab? *(e.g. folders, refrigerator, floor , etc.)*

_____

How often and how well have you done that job in the past few weeks?

_____

UNIT 9 – CEREAL COOKERY

Objectives: Upon conclusion of this unit the student will –

Explain the principles involved in cereal cookery.

Apply the principles of cereal cookery to the preparation of rice and macaroni products.

Discuss the nutritive value of cereal.

Topics:

A. Cereal Grains, Products, and Terminology
B. Rice Cookery and Use
C. Macaroni

Topic A – Cereal Grains, Products, and Terminology

Objective: The student will name cereal grains and identify products.

The student will diagram the cereal grain, indicating nutritive value included therein.

The student will describe the principles by which cereal is prepared.

Lessons:

1. Distribute lab sheets and establish objectives. Plan time and procedures.

2. Have students research nutritive value and background on cereal grains.

3. Demonstrate the principles of cereal cookery by preparing hot cereal.

    a. Stir into rapidly boiling salted water.
    b. Cook, stirring occasionally, to prevent lumping.
    c. Stir infrequently to prevent gluten formation.

4. Visit supermarket to find and compare cereal products: regular rice, quick rice, wild rice, rice krispies, puffed rice, rice convenience products. Have students calculate and record unit prices for comparison.

Topic B – Rice Cookery and Use

Objective: The student will conduct a comparative study of regular rice and quick-cooking rice. Conclusions should be based on price, time and ease of preparation, and results.

The student will browse through cookbooks noting requirements in recipes for cooked rice or for rice to be cooked according to directions; students will be aware of the differences to avoid errors in the amount of rice used.

The student will sample a variety of rice dishes.

Lessons

1. The students should browse through cookbooks to find recipes calling for cooked rice. These will be prepared after the initial experiment and may be desserts or main dishes.

2. Conduct the rice experiment and analyze the results.

3. Prepare one of the dishes found previously.

4. Calculate costs of products as in (part 4).

Topic C – Macaroni Products

Objective: The student will apply the principles of cereal cookery to the cooking of macaroni.

Lessons:

1. Prepare for and conduct the experimental and sampling lab (Part 3.)

2. Calculate costs as in Part 4.

3. Students make homemade noodles.

Evaluation:

Lab sheets and participation.

Resources:

Shank Fitch, Chapman *Guide to Modern Meals,* Chapter 14.

STUDENT LAB SHEET

Cereal Cookery **Name** _____

Objectives:
1. Name the cereal grains and discuss nutritive value.
2. Prepare rice and macaroni according to the principles of cereal cookery.
3. Research recipes for ideas for using cereal products.
4. Research textbooks for information concerning the preparation of cereal grain products.
5. Do a comparative study of rice.
6. Conduct experiments using rice and macaroni.

Part 1.

1. List the cereal grains *rice*, *oats*, *wheat*, *corn*, *rye*, *barley*, *malt*

2. a. Diagram a cereal grain labeling each part.

   b. What is the nutritive value of cereal? Label the location of the nutrients in the diagram.

3. Vocabulary

   Refining *(The milling process in which the outer layer (bran) is removed. The majority of people in the U.S. prefer refined cereal products.)*

   Enrichment *(The process of returning nutrients to the refined cereal.)*

   Whole grain products *(unrefined grain – bran, germ, endosperm included).*

4. List several foods which contribute to the cereal content in the diet.

   (macaroni), *(hot and cold cereals)*, *(flour and baked goods)*, *(rice pudding)*, *(bread)*, *(some candies and snacks)*

5. By what principles or rules are cereals cooked?

   (Cereals expand when they are cooked in hot liquid – This is how flour performs the function of thickening mixtures. When adding cereal to liquids they should be added to cold liquid, then heated; or they should be stirred into rapidly boiling water. Stir occasionally to prevent lumping but not too steadily or glue will form. Salt is added to bring out the flavor and prevent a "flat" taste.)

6. Compare the costs of several forms of rice:

Product	Price – weight	price/oz.	price/lb.
regular rice			
quick rice			
wild rice			
prepared rice cereal			

Part 2.

1. What is the difference between 1 cup cooked rice and 1 cup raw rice?

   (1/3 cup raw rice cooked = 1 cup cooked rice)

   (1 cup raw rice cooked =3 cups cooked rice)

   Look for recipes to determine how this is indicated. What did you find?

   (the directions tell you when to cook the rice – the number of servings is an additional clue.)

2. List several recipes and sources that call for cooked rice.

   Students research _____

   _____

   _____

3. a. Cook ½ c. regular rice according to the directions given you. How long did it take? Time began _____ Time finished _____ Total time _____

   What did it measure after it was cooked? _____

   b. Cook ½ cup quick cooking rice according to the directions. How long did it take? Time began _____ Time finished _____ Total time _____

   What did it measure after it was cooked? _____

   c. Did you draw any conclusions? _____

   _____

   _____

4. Prepare a dish from #2 above using the rice from the experiment.
5. Plan and write a menu around a dish using the rice you prepared.

Part 3.

1. Look up a recipe for making noodles. What ingredients are called for?

   (eggs, salt, flour, and water)

2. Vocabulary – (Students derive definitions)

   Pasta _____

   Macaroni _____

   Spaghetti _____

   Elbow Macaroni _____

   Linguine _____

   Egg noodles _____

   Pastine _____

3. List several main dishes and accompaniments which are made with macaroni.

   _____ _____

   _____ _____

   _____ _____

   _____ _____

   _____ _____

4. Select a casserole that requires the use of spaghetti or macaroni. Plan and prepare the dish and record the following information:

   What did the macaroni measure before cooking? _____

   What did the macaroni measure after cooking? _____

   How many portions of average size did the recipe serve? _____

5. Plan a menu around the product you prepared.

Part 4.

1. What were the costs of the two products prepared in your group?

Rice product – costs

Item	Amount called for	Unit cost	Total
		Total	

Macaroni product – costs

Item	Amount called for	Unit cost	Total
		Total	

Evaluation of Cereal Lab

UNIT 10 – EGGS, EGG COOKERY

Objectives: Upon the completion of this unit the student will –

Explain the principles of egg cookery

Perform specific procedures:
- using the custard method, add egg to hot mixtures
- separate eggs
- prepare meringue
- prepare an emulsion

Prepare eggs according to professional standards

Topics:

A. Principles of protein cookery
B. Egg dishes
C. Buying, storing, using eggs
D. Properties of eggs
E. Health practices when handling food

Topic A – Principles of Protein Cookery

Objectives: Upon completion of this lesson the student will explain the principles of egg cookery and apply them to the preparation of eggs and products utilizing eggs.

Lessons:

1. Distribute lab sheets – review objectives requirements, worksheets and procedures.

2. Discuss the principle of protein cookery as it applies to eggs. Demonstrate by poaching an egg, recording the water temperature at which coagulation takes place. Hard cook three eggs as follows:

   a. Bring water to boil. Add egg, cover and let stand 20 minutes.

   b. Bring water to boil, add egg, cook slowly (just below boiling) for 8 minutes.

   c. Add egg to boiling water. Boil 6 minutes.

   Compare the 3 eggs for texture and appearance.

Topic B – Egg Dishes

Objectives: The student will prepare egg dishes according to objective, professional standards using principles of protein cookery.

Lessons:

1. Students derive definitions and suggest precautions in preparing eggs on sheet "Egg Cookery Definitions".

2. Students prepare egg dishes from list.

Topic C – Buying, Storing, Using Eggs

Objectives: The student will separate eggs singly without getting yolks into accumulated whites. The student will reflect understanding of nutritional value of eggs, forms of eggs purchased.

Lessons:

1. Demonstrate separating eggs. Students will practice by separating eggs to be used in all recipes.

2. Place chart of equivalents on bulletin board for student reference.

EGGS

Whole	Whites	Yolks
1 = 1/4 c	1 = 2 T	3 = 1/4 c
2 = 1/3 - 1/2 c	2 = 1/4 c	4 = 1/3 c
3 = 1/2 - 2/3 c	3 = 6 T	5 = 6 T
4 = 2/3 - 1 c	4 = 1/2 c	6 = 1/2 c
	5 = 2/3 c	

3. Use slides, charts or transparencies to illustrate grades of eggs. Students compare prices and sizes of eggs. Discuss uses of eggs of different grades and sizes.

4. Complete background and worksheets.

Topic D – Properties of Eggs

Objectives: The student will be able to describe and perform the following procedures: prepare emulsion as with mayonnaise; prepare meringues, fold in; use custard method of adding eggs to hot mixtures.

Lesson:

Plan and carry out student demonstrations:

a. Hollandaise sauce on broccoli
b. Cream puffs and custard filling – eggs as thickeners – custard method of adding eggs to hot mixtures
c. Baked Alaska – meringue, cream of tartar
d. Mayonnaise – eggs as emulsifiers
e. Soufflé – folding ingredients into beaten egg whites.

Evaluation:

Student performance
Quiz (attached)
Self evaluation sheet

Topic E – Health practices when handling foods

Objectives: The student will cite and use health practices when handling foods.

Lessons:

1. Research and list health practices on worksheet.

2. Obtain and review local health ordinances.

Resources:

McCully, Helen; Jacques Pepin and William North Jayme. *The Other Half of the Egg.*

STUDENT LAB SHEET

Egg Cookery **Name** _____

Objectives: Explain principles of egg cookery

Perform specific procedures:
- Custard method of adding eggs to hot mixtures
- Separating eggs
- Preparing meringue
- Preparing an emulsion

Prepare eggs according to **professional** standards.

1. Prepare a menu around three of the products prepared in class.

2. Complete the worksheet on eggs.

3. List some health practices which should be observed when a person is handling food.

   (Wash hands before handling food, after sneezing or coughing.)

   (Wear an apron.)

   (Keep hair tied back or covered. Avoid combing hair near food.)

   (Use a tasting spoon for sampling products.)

   (Clean as you work.)

   (Do not handle foods when you are ill.)

Procedure:

Part A: Prepare eggs according to the professional standards set for appearance, texture, and according to methods suggested in the cookbook.

Part B: Demonstrate the assigned product to the ss.

See Chart – Egg Cookery Demonstrations

Evaluation:

Evaluate the lab experiences in terms of benefit to you as an individual. Include problems and special learnings as well as areas where you were successful and those where improvement is needed. Use the reverse side of this page.

STUDENT LAB SHEET

Egg Cookery – Definitions **Name** _____

(Students read recipes and directions and derive definitions. List the special instructions, also).

Fried eggs –

Scrambled eggs –

Poached eggs –

Shirred eggs –

Hard cooked eggs –

Soft cooked eggs –

Omelet –

Spanish omelet –

Western omelet –

Eggs foo yong –

Deviled eggs –

Eggs Benedict –

Eggs a la goldenrod –

EGG COOKERY DEMONSTRATION

Product	Principles Demonstrated
Baked Alaska	Beaten egg whites are used as an insulator. Cream of tartar is used for strength.
Hollandaise Sauce	Slow cooking is important or the sauce will curdle. Should this occur, add a few drops of cold water and beat.
Mayonnaise	Egg yolks may be used as an emulsifier. Add oil to egg yolk and seasonings one drop at a time. Should the mixture separate, add separated mixture to new yolk one drop at a time.
Cream puffs with custard filling	Eggs in cream puff shells form the main part of the structure; steam is the leavener. The custard method of adding eggs to hot mixtures: Combine sugar and cornstarch with milk – heat. Pour one-half of the cornstarch mixture into eggs, stirring constantly. Return egg mixture to first mixture, heat.
Cheese Soufflé	Eggs are to be separated carefully, singly; egg whites should not be collected over other whites. White sauce preparation – melt butter, add flour, stir in milk, bring to boil. Beaten egg whites are folded into white sauce mixture.

STUDENT LAB SHEET

Eggs – Buying and Storing, Use **Name** _____

1. What is the food value of eggs? _____
2. What determines the freshness of an egg? *(The manner in which they have been kept – refrigerated.)*

   How can an egg be tested for freshness? *(by candling)*

   (By placing in water, an egg that is fresh will stay at the bottom, an older egg will float because of accumulated gases).
3. Why is the washing of eggs undesirable?

   (Washing removes the protective coating, enabling bacteria and odors to enter through the porous shell).
4. Describe the differences between the following kinds of eggs:

   Grade AA *(Very high, firm white, centered yolk)*

   Grade A *(Medium high, firm white, yolk somewhat centered)*

   Grade B *(White may be watery, yolk may not be centered)*
5. What is the difference between brown and white eggs?

   (Color. There is no significant difference in nutritive value or flavor. Size may vary; price varies by weight and demand).
6. How should eggs be stored? *(Store refrigerated.)*
7. Uses of eggs:

	Examples:
Alone as food	*(Scrambled Eggs)*
Leaveners	*(Sponge cake, soufflé)*
Thickening agents	*(Custards)*
Binders	*(Meat loaf)*
Coating	*(Fish, Veal)*
Emulsifiers	*(Mayonnaise)*
For adding color, richness, flavor	*(Egg bread)*
Garnishes	*(Sliced eggs atop salad)*

8. How should egg whites be beaten?

(For best volume, whites should be at room temperature.)

(Egg whites must be free of yolk or other particles containing fat. Use clean bowl and clean beaters.)

(Cream of tartar is used to enable beaten whites to withstand the heat of the oven.)

(Beat until frothy – soft peaks – stiff peaks, but not dry).

9. By what principles of protein cookery are eggs prepared?

(Eggs coagulate at low temperatures. Therefore, they are to be cooked slowly, using low heat.)

(Eggs will cause cooked mixtures such as sauces and custards to curdle if they are overheated.)

10. How can leftover egg whites be stored and used?

(Store egg whites covered and refrigerated.)

(Students should browse through cookbooks and find recipes using egg whites only: meringues, frostings, cookies, cakes)

11. How can leftover egg yolks be stored and what are some suggestions for using them?

(Store egg yolks in a jar covered with water, or freeze in ice cube trays.)

(Students browse in books to find recipes using yolks – cookies, sauces)

12. How should eggs be separated?

(Separate each egg over an individual dish. When white has been collected successfully with no yolk present, add to previously collected whites. DO NOT SEPARATE OVER WHITES ALREADY COLLECTED, or addition of broken yolk, should this occur, will contaminate entire amount.)

LAB EVALUATION

Egg Cookery Name _____

Check the answer(s) that best apply:

1. I spent the class time:
   - _____ working entirely on preparation and clean-up.
   - _____ resting.
   - _____ preparing the product and working on the lab write-up.
   - _____ preparing the product and resting.
   - _____ other (specify) _____

2. I participated in the clean-up:
   - _____ as little as possible.
   - _____ not at all.
   - _____ completely.
   - _____ along with my kitchen.
   - _____ other (specify) _____

3. I did my special clean-up assignment in the lab which is
   - _____ not at all, did not have time.
   - _____ thoroughly.
   - _____ half-heartedly.
   - _____ other (specify) _____

4. When I entered the lab, I
   - _____ was well prepared.
   - _____ was vaguely aware of what I was to do.
   - _____ was confused.
   - _____ was unprepared.
   - _____ had read and copied the recipe.
   - _____ had not read or copied the recipe.
   - _____ was not prepared because I had been absent the day before.
   - _____ other (specify) _____

5. As far as being finished on time:
   - _____ we were completely finished on time.
   - _____ the right ingredients were not available.
   - _____ the eggs took longer to cook than we thought.
   - _____ our kitchen was shorthanded.
   - _____ not enough time was left in the period for clean-up.
   - _____ other (specify) _____

6. The primary principle to be followed in the preparation of eggs is
   _____ Eggs consist of protein, and coagulate with low heat. Cook slowly or they will toughen.
   _____ don't know.

7. My kitchen prepared _____
   _____ according to the principles.
   _____ our own way.

8. Our product could have been described as:
   _____ attractive
   _____ unattractive
   _____ delicious
   _____ overpowering
   _____ tender
   _____ tough
   _____ just right
   _____ other (specify) _____
   _____ pleasant tasting.
   _____ salty
   _____ moist and fluffy
   _____ dried out
   _____ undercooked
   _____ overcooked

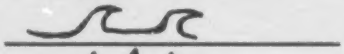
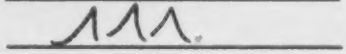
QUIZ – EGG COOKERY

Name _____

Class demonstrations were given in order to show you some techniques in preparing foods that use eggs in a variety of ways. They were also done to give you examples of important principles or rules in preparing eggs. This quiz is an attempt to find out whether you learned the principles being demonstrated.

Answer each question in short, complete statements.

Baked Alaska

1. What is cream of tartar? *(acid from grapes)*
2. Why is cream of tartar used in beaten egg whites and meringues? *(Help withstand oven heat)*
3. What important precaution is given when separating egg whites for the purpose of making meringue? *(No yolk must get into whites or they will not become stiff when beaten.)*
4. What is the function of beaten egg whites in baked Alaska? *(Insulation)*
5. What are soft peaks?  (Pictures
6. What are stiff peaks?  will do!)
7. Why are egg whites beaten until they are stiff and glossy but not dry? *(So they still have their elasticity)*
8. What important procedures insure that baked Alaska will hold its shape in the oven? *(Cover every area – no spaces.)*

Hollandaise Sauce

9. What three ingredients are in Hollandaise sauce? *(butter) (egg yolks) (lemon)*
10. What is the critical step or direction in making smooth Hollandaise sauce? *(heat slowly)*
11. What function do the eggs in Hollandaise sauce perform? *(thickener)*

Mayonnaise

12. What function do eggs perform in Mayonnaise? *(Emulsion – hold ingredients in suspension.)*
13. What is the most critical procedure in making mayonnaise? *(add oil 1 drop at a time)*

Cream Puffs

14. What is the procedure for making cream puff batter? *(Boil water and butter, stir in flour, add eggs one at a time.)*
15. How does the flour thicken the mixture involved in the first step? *(it expands when introduced to hot liquid)*

Rich Custard Filling

16. Why is the flour mixed with the sugar before the liquid is added? *(to mechanically separate flour granules to prevent lumps)*
17. Describe the method for adding eggs to a custard mixture. *(stir a little over half of white sauce mixture into eggs, pour egg mixture into remaining sauce and mix)*
18. Why are the eggs added this way? *(to keep them from coagulating upon contact)*

Soufflé

19. Outline the steps in making a soufflé. *(Prepare thick white sauce. Add flavoring. Fold into stiffly beaten egg whites – bake)*
20. What is the function of egg whites in soufflé? *(leavener)*
21. What does the term "fold in" mean? *(turn lightly over and over)*
22. What utensil is used for folding in? *(rubber spatula)*
23. What happens to beaten egg whites if ingredients are beaten in rather than folded in? *(there is a loss of air, they collapse, and product will not rise)*
24. What happens to whipped cream if ingredients are stirred in or beaten in instead of being folded in? *(it may turn to butter)*
25. What principle or rule did you observe in the preparation of Hollandaise sauce, custard filling, soufflé, and other dishes made primarily with eggs?
(Same as egg cookery – use very low heat)

UNIT 11 – PRINCIPLES OF MILK COOKERY

White Sauce

Objectives: At the conclusion of this unit the student will –

Prepare white sauce.

Chart proportions for white sauces of varying densities noting uses.

Explain thickening agents and their use.

Discuss nutritive value of milk.

Describe forms of milk.

Cite principles for using milk in cooking procedures.

Lessons:

1. Nutritive value of milk. Using overhead projector or charts or texts as resources. Students complete nutritional aspects of milk on worksheet.

2. Purchasing milk products. Using references and sample products discuss – explain – research forms of milk sold.

3. Chart the proportions for white sauce and use filmstrip and/or demonstrated standard preparations.

4. Students plan and prepare dishes using white sauce.

Additional Activities

5. Explore the supermarket for non-dairy products. Make a list of those found in the dairy department, in frozen foods, and in canned goods. Use the chart "Non-Dairy Products" and record ingredients, price, and comments.

6. Whip heavy cream to demonstrate the stages through which it goes and the danger of over-beating. Have students taste the whipped cream to sample its texture when it is thick. Continue to beat until it separates (curdles). Sample again. Beat until butter is made. Sample on toast.

Evaluation:

Quiz
Participation

Resources:

Medved, *The World of Food*
Shank, Fitch, Chapman, *Guide to Modern Meals*

STUDENT LAB SHEET

White Sauce – Milk **Name** _____

Objectives: Gain a thorough understanding of the proportions and procedures in making white sauce or cream sauce.

Recipes: attached

Menu Planning: Plan a menu around each of the following foods:

Lobster Newburg Tuna-noodle Casserole

Related Information:

1. Memorize the chart for white sauce as it appears in your worksheet.
2. What are the steps in making white sauce?

   (a. melt butter)

   (b. stir in flour)

   (c. add milk slowly)

   (d. bring to a boil, boil one minute, to cook the starch)
3. How does flour perform the function of a thickening agent? *(Flour expands in the hot liquid. When the mixture boils, it is as thick as the proportion dictates.)*
4. How is cornstarch interchanged with flour as a thickening agent?

   (a. Cornstarch is more concentrated, use less.)

   (b. Cornstarch forms a clear product as it thickens.)
5. Describe three ways in which flour may be added to hot liquids.

   (a. add to melted butter, then add liquid)

   (b. combine with cold water, then add to hot liquid)

   (c. in sweet mixtures, combine with sugar, then add liquid)
6. **Vocabulary:**

   Roux – *(a mixture of melted butter and flour; the first step in white sauce)*

   Soufflé – *(light airy baked main dish or dessert made with white sauce, meringue, and flavoring)*

   Bisque – *(thick cream soup)*

   Croquettes – *(ground food mixed with thick white sauce, molded and fried or baked)*

   Arrowroot – *(a thickener used by gourmet cooks, more concentrated than cornstarch)*

STUDENT LAB SHEET

Milk **Name** _____

1. Which of the following nutrients are contained in milk in substantial amounts?

Fat	*(+ in cream)*	Iron	*(low)*
Sugar	*(+ lactose)*	Iodine	*(none)*
Starch	*(+)*	Vitamin A	*(++)*
Protein	*(+)*	Vitamin C	*(none, except raw)*
Calcium	*(+++)*	Thiamine B_1	*(+)*
Phosphorus	*(+)*	Riboflavin B_2	*(+)*
Water	*(+++)*	Niacin	*(+)*
		Vitamin D	*(only when added)*

2. How much milk is required daily by:

   Children *(3 glasses or more)* Teenagers *(4 glasses or more)*

   Adults *(2 glasses or more)*

3. What foods may be used as alternates for milk?

   (cheese, butter, creamed soups, milk desserts)

4. Briefly describe the form of milk listed below:

   Raw milk – *(from the cow)*

   Pasteurized milk – *(heated to destroy bacteria)*

   Homogenized milk – *(forced through sieve to distribute fat globules throughout).*

   Certified Milk – *(having rigid sanitation requirements set by American Association of Medical Milk Commissions.)*

   Vitamin D milk – *(fortified by the addition of Vitamin D)*

   Skim milk – *(Most of the fat has been removed)*

   Fermented milk:

   Sour milk – *(lactic acid is added to curdle)*

   Buttermilk – *(milk remaining after butter has been made).*

   Cultured buttermilk – *(lactic acid bacteria is added to skimmed milk).*

   Yoghurt – *(cultured using acid-forming bacteria).*

   Chocolate flavored milk –*(whole milk with chocolate added)*

   Chocolate flavored drink – *(skim milk with chocolate added).*

Cream:

Light cream or coffee cream – *(18-30% fat content)*

Medium cream or light whipping cream – *(30-36% fat content)*

Heavy cream or heavy whipping cream – *(over 36% fat content)*

Half and half – *(very light cream – 11% fat content)*

Evaporated milk – *(60% water removed – canned)*

Condensed milk – *(evaporated with sugar added – used in candies)*

Dried whole milk – *(water removed)*

Dried skim milk or non-fat dry milk solids or powdered milk *(skim milk with almost all water removed)*

5. In what ways can milk be included in the diet? *(Use dishes made with milk: puddings, custards, white sauce dishes, cereal with milk)*
6. What are the proportions for reconstituting dry milk?
   (1/3 to 1, that is 1/3 cup dry milk and scant cup of water = 1 cup milk)
7. How may evaporated milk be substituted for whole milk in a recipe?
   (50% evaporated milk + 50% water = whole milk)
8. What are the instructions for whipping evaporated milk?
   (Chill bowl and beaters. Freeze milk 1 inch around sides of ice cube tray. Whip)
9. What caused the film on heated milk and how can this be prevented?
   (Protein solidifying on the surface. Use a lid while heating.)
10. How can one substitute for sour milk in a recipe?
    (1 c buttermilk = 1 tablespoon lemon juice or vinegar + enough milk to make 1 cup).
11. Chart the proportions for White Sauce (Cream Sauce)

	Butter	Flour	Milk	Salt	Pepper	Uses
Thin	*(1 T)*	*(1 T)*	*(1 c)*	*(½ tsp)*	*(dash)*	*(starchy vegetables, soups)*
Medium	*(2T)*	*(2 T)*	*(1 c)*	*(½ tsp)*	*(dash)*	*(general use, sauces creamed vegetables)*
Thick	*(3 T)*	*(3 T)*	*(1 c)*	*(½ tsp)*	*(dash)*	*(souffle)*
Very thick	*(4 T)*	*(4 T)*	*(1 c)*	*(½ tsp)*	*(dash)*	*(croquettes)*

Review the directions for preparing white sauce:

a. Melt butter
b. Stir in flour
c. Add milk gradually
d. Bring to boil, stirring constantly. When the mixture boils it is as thick as it will become.
e. Cook one minute to cook the starch.

Seafood A La Newburg

2 c. hot medium White Sauce
2 egg yolks, beaten
1 T sherry flavoring or lemon juice
2 c seafood, in large pieces

Mix white sauce and egg yolks carefully. Just before serving, stir in flavoring and seafood. Serve over rich biscuits or toast points or in patty shells. Garnish with parsley or pimiento. 6 – 8 servings

Seafood Casserole

2 T. onions, chopp[illegible]
2 c. white sauce *or* 1 can cream of mushroom soup
2 c. potato chips, crushed
1 can tuna fish
1/2 tsp salt
1/4 tsp pepper
2 c cooked macaroni
1/2 c cheese, shredded

Add onions to white sauce. Put a layer of potato chips on bottom of greased baking dish. Combine all ingredients except cheese and chips. Put in baking dish. Cover with a layer of cheese and a layer of potato chips. Bake at 350° F. for 30 minutes. 6 servings

STUDENT LAB SHEET

Non Dairy Products Survey **Name** _____

(Students research in supermarket.)

Product	Wt.	Price	Ingredients
1. Coffee Creamers			
Cremora			
Coffee Mate			
Purex			
2. Drinks			
Chocolate Drink			
3. Desserts and Toppings			
Cool Whip			

4. Yoo Hoo is advertised as a nutritious soft drink. What are the ingredients?

_____

5. What conclusions have you drawn as a result of this survey?

_____

QUIZ – MILK AND WHITE SAUCE

Part 1 – 40 points **Name** _____

1. Name three nutrients that are not found in milk in sufficient quantity.

   (iodine – Vitamin C – iron)

2. What is the daily requirement of milk for:

   adults *(2 or more cups)* teenagers *(4 or more cups)*

   children *(3 or more cups)*

3. Name two forms of milk in which there is a moderate to high fat content.

   (cream – whole milk)

4. List the steps in preparing white sauce.

   a. *(melt butter)* c. *(stir in milk)*

   b. *(add flour)* d. *(bring to boil, cook 1 minute)*

Part 2 – 50 points

Define:

Buttermilk – *(milk after butter is removed – low fat content – often cultured).*

Bisque – *(thick soup made with white sauce).*

Roux – *(first step in white sauce – melted butter and flour).*

Condensed milk – *(thick, sweetened milk with 50% water removed).*

a la king – *(meat or fish in medium white sauce served over rice or toast).*

Part 3 – 20 points – Complete the chart for white sauce:

	Butter	Flour	Milk	Uses
thin	*(1 T.)*	*(1 T.)*	*(1 c.)*	*(starchy vegetables, soup)*
medium	*(2 T.)*	*(2 T.)*	*(1 c.)*	*(creamed vegetables)*
thick	*(3 T.)*	*(3 T.)*	*(1 c.)*	*(soufflé)*
very thick	*(4 T.)*	*(4 T.)*	*(1 c.)*	*(croquettes)*

Part 4 – 10 points

Matching: Match the number on the right with the letter of the correct response.

1. light cream	*(e)*	a. Milk treated for even fat distribution
2. yoghurt	*(d)*	b. contains not less than 11.5% fat.
3. half and half	*(a)*	c. over 36% fat content, whipping cream.
4. chocolate drink	*(f)*	d. prepared by the addition of special forms of acid-forming bacteria.
5. heavy cream	*(c)*	e. contains 18-30% fat.
		f. fat content is not regulated by government standards.

UNIT 12 – UNIFORMITY OF PRODUCT: COOKIES

Objectives: Upon the completion of the unit the student will –

Prepare a variety of cookies which meet acceptable standards of quality.

Achieve uniformity in preparing baked products.

Exhibit objectivity, self control and pride in the finished product to insure an adequate yield.

Derive definitions by reading and analyzing recipes.

Calculate costs of products prepared in class.

Lessons:

1. Assign student lab sheets. Set up objectives, plan procedures.
2. Show filmstrip "Cooky Wise". (Betty Crocker)
3. Demonstrate procedures and techniques in preparing cookies.
4. Plan and prepare cookies in each category: bar cookies, rolled cookies, pressed cookies, molded cookies, drop cookies and refrigerator cookies. Emphasize accuracy, care in preparation, and pride in workmanship. Measure and weigh yields to ensure adequate numbers, and to promote self control.
5. Serve cookies attractively for a student-faculty tea, open house, or other similar occasion. Serve hot spiced cider, punch, coffee or tea with the cookies.
6. Students complete the vocabulary list by reading recipes and deriving definitions. Definitions should include:

   The food classification
   Characteristic flavors or unique ingredients
   Shapes, colors and appearance
   Special preparation techniques, if any.

   Practice by deriving a few definitions.

Additional Activity:

7. Students construct and decorate Gingerbread House (see instruction sheet page 94).

Evaluation:

1. Weight and examine yields to determine quality and quantity.
2. Complete Lab Worksheet.
3. Use evaluation sheet for effective domain.

References

Betty Crocker Cookbook
Better Homes and Gardens Cookbook

STUDENT LAB SHEET

Cookies **Name** _____

Objectives:
Prepare various types of cookies
Achieve uniformity of product
Exhibit objectivity and self control to insure adequate yield
Demonstrate accuracy of preparation
Calculate cost of product
Evidence pride in workmanship
Assume responsibility for outcomes desired

Cookies of varying types are to be prepared, using high standards of workmanship so that the results will be of high quality. In addition to preparation skill, techniques in decorating foods carefully and with a sense of what is attractive will be covered. Quantity and quality of yield are also among the criteria to be considered when evaluating the products.

Related Information:

1. Complete the chart:

Type	Description	Examples
Drop	*(Soft dough – dropped by spoonfuls on cookie sheets)*	*(chocolate chips) (oatmeal cookies)*
Refrigerator	*(Firm dough rolled into a cylinder, refrigerated, sliced, and baked)*	*(brown sugar refrigerator & pinwheel cookies)*
Bar	*(Soft dough poured into square pans, baked, cut in squares)*	*(brownies) (date-nut squares)*
Rolled	*(Firm dough, rolled out and cut in shapes)*	*(butter cookies, sugar cookies, gingerbread men)*
Pressed	*(Soft dough, pushed through a special "gun" in shapes)*	*(spritz)*
Molded	*(Firm dough shaped with the hands)*	*(peanut butter cookies) (crescents)*

2. Vocabulary: (students derive: classification, flavor, use-preparation)

Confection *(a candy)*

Filbert *(a small round nut)*

Meringue *(a cooky predominantly egg white)*

Shortbread *(a rolled cooky – high shortening content – bland – cut in squares)*

Derive from recipes:

Spritz

Marzipan

Hermits

Check ingredients in prepared package:

Mincemeat

Sample commercial cookies, read ingredients and derive definitions:

Pfefferneusse

Springerle

3. By what standards should cookies be evaluated:

a. General standards *(Uniformity of size and shape according to variety)*
(Texture – interesting and pleasing)
(Pleasant flavor).

b. Specific standards:

Drop	Refrigerator	Bar
(uniformity)	*(uniform)*	*(uniform shape)*
(interesting texture)	*(delicately browned)*	*(moist, chewy texture)*
(pleasant flavor)	*(crisp texture)*	*(pleasant flavor)*
	(pleasant flavor)	
Rolled	**Press**	**Molded**
(uniformly and lightly browned)	*(clearly defined shapes)*	*(uniform size & shape)*
(crisp or soft textured, depending on variety)	*(evenly browned)*	*(interesting texture)*
(interesting variety of shapes)		*(pleasant flavor)*

4. What are some specific guidelines for baking of cookies?

(Grease pans according to directions. Too little makes cookies with low fat content that stick; too much makes them spread.)

(Pans should not touch each other, or the sides, or back of the oven)

(Place pans in the center of the oven for even circulation).

(When cookies are finished:

Bar cookies shrink from sides of pan.

Drop cookies are springy to the touch.

Remove cookies from pan immediately and place on rack. Exception is bar cookies. These should be cut when cooled).

5. How should cookies be stored?

Cool before storing

Soft cookies in tightly closed containers

Crisp cookies in containers with loose lids, as cookie jars.

Cookies may be frozen in airtight containers for about nine months.)

STUDENT LAB SHEET

Laboratory Data and Summary **Name** _____

Cost of products. For each of the products your kitchen prepares, complete the information below.

Product _____

Ingredient	Cost per unit	Amount used	Total
flour			
butter			
sugar			
eggs			

Actual yield _____ Total _____

Product _____

Ingredient	Cost per unit	Amount used	Total
flour			
butter			
sugar			
eggs			

Actual yield _____ Total _____

Product _____

Ingredient	Cost per unit	Amount used	Total
flour			
butter			
sugar			
eggs			

Actual yield _____ Total _____

Product _____

Ingredient	Cost per unit	Amount used	Total
flour			
butter			
sugar			
eggs			

Actual yield _____ Total _____

COOKIES – SELF EVALUATION

Name_____

Evaluation of lab experiences should be done with reference to the objectives originally set up. Please answer the following questions thoughtfully and specifically; include examples wherever possible.

I. Various types of cookies.

1. To what extent have you become aware of the various types of cookies and the different procedures for making them?

2. Which type did you enjoy making the most?

II. Uniformity of Product

1. Were the cookies you made uniform in shape, size, and degree of doneness?

2. What problems did you have in creating a uniform product?

3. How did the overall appearance of the cookies impress you when they were served?

III. Objectivity and self control

1. Were you able to prepare the cookies without feeling the need to lick your fingers, eat the dough, or eat the finished product on the day they were prepared?

2. Did you enjoy the cookies on the day they were served, or were you tired of them?

IV. Accuracy of preparation. Were all of your products up to the standards established? Explain.

V. What new techniques did you learn?

VI. Were you proud of the finished products? Explain.

VI. Were you proud of the finished products? Explain.

VII. To what extent did you assume the responsibility for the results in your kitchen?

VIII. Did you taste the cider? What was your reaction?

IX. Have you made cookies at home since we began the lesson? If so, what kinds?

Were you successful? Explain.

If you have additional points to make on this evaluation include them in the open space provided on the lab form. Hand this sheet in with the lab.

GINGERBREAD HOUSE

Name _____

Objectives: Produce a product of saleable quality.
Develop an artistic or aesthetic sense in preparing decorative products.

Gingerbread dough (stiff)

Mix thoroughly	1/3 cup shortening
	1 cup brown sugar
	1 ½ cups molasses
Stir in	2/3 cup cold water
Sift together and stir in	7 cups sifted flour
	2 tsp soda
	1 tsp salt
	1 tsp allspice
	1 tsp ginger
	1 tsp cloves (ground)
	1 tsp cinnamon

Chill dough. Roll out very thick (1/2"). Using cardboard pattern cut shapes for roof, side walls, and ends. Cut doors, shutters, and other accessories if desired. Bake at 350° about 15 minutes. Cool slightly, then carefully remove from sheet.

To decorate:

Prepare mortar using 2 egg whites and 1½ cups of confectioner's sugar. Place the parts of the house together using the mortar and decorate with assorted candies if desired.

Shapes:

Additional Instructions: Complete the planning sheet, determining whether you would like to keep the house, sell it on your own, or sell it for the department. Submit planning information to the lab manager, business manager, and teacher. Include the planning sheet with this sheet at the conclusion of the experience.

Evaluation: Evaluate your product; the work you did; and to what extent you benefited from this project.

UNIT 13 – EMPLOYMENT OPPORTUNITIES

Objectives: Upon completion of this unit the student will –

Identify and describe a variety of employment opportunities in foods-related occupations.

Conduct an in-depth study of one foods-related occupation.

Fill out an employment application.

Identify personal strengths and weaknesses.

Discuss opportunities for further training.

Topics:

A. Foods-Related Occupations
B. Selling yourself
C. Further training opportunities

Topic A – Foods-Related Occupations

1. The student will identify and describe a minimum of five employment opportunities in foods-related occupations as found in want ads.

2. The student will diagram the levels of foods-related work opportunities found in a given establishment, e.g. restaurant, supermarket.

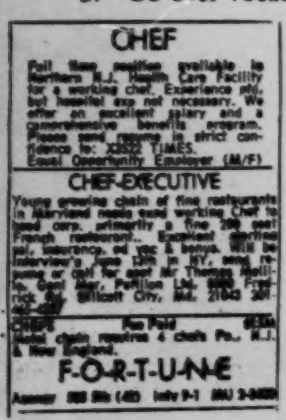
3. The student will conduct an interview or other in-depth study of a single foods-related occupation.

Procedure:

1. Assign #1 on Foods-related occupations assignment sheet.

2. List in class employment opportunities found.

3. Go over vocabulary together.


CHEF

Full time position available in Northern N.J. Health Care Facility for a working chef. Experience reqd, but hospital exp not necessary. We offer an excellent salary and a comprehensive benefits program. Please send resume in strict confidence to: X3522 TIMES.
Equal Opportunity Employer (M/F)

CHEF-EXECUTIVE

Young growing chain of fine restaurants in Maryland needs qual working Chef to lead corp. primarily a fine 200 seat French restaurant. Excellent starting sal, insurance, ad exc & bonus. Will be interviewing June 13th in NY, area resume or call for appt Mr Thomas Hollis, Corp. Dev. Pavilion Ltd., [illegible] rick Rd, Efficot City, Md. 21043 301-461-[illegible]

FOOD
KITCHEN SERVICE SUPERVISOR

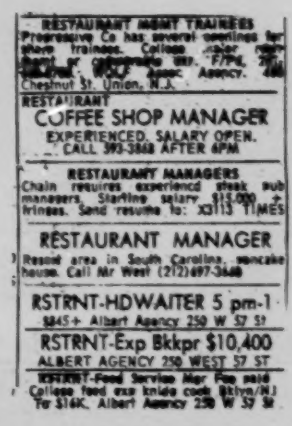
Major Bronx hospital needs responsible individual to supervise staff of approximately 30 employees. Community college or trade school grad with min 1 year supervisory exp. Food quantity food background is required. We offer excellent starting salary. Call Mr. Hudson [illegible]

montefiore
HOSPITAL & MEDICAL CENTER
An Equal Opportunity Employer

FOOD SERVICE MGRS/ASSTS

to $16K++ FEE PAID
We have immediate openings available with a major food chain. Solid background a must. 5 day work week, mostly days. Metro N.Y. locations & excellent co. benefits. Apply immediately; ask for Irv Lazlen.

ATWOOD VANDELL


RESTAURANT MGMT TRAINEES
Progressive Co has several openings for above trainees. College [illegible] Agency. [illegible] Chestnut St. Union, N.J.

RESTAURANT
COFFEE SHOP MANAGER
EXPERIENCED. SALARY OPEN.
CALL 393-3868 AFTER 6PM

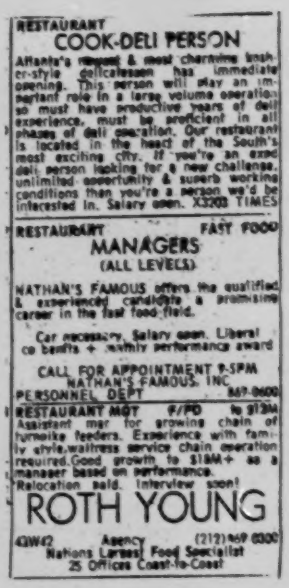
RESTAURANT MANAGERS
Chain requires experienced steak sub managers. Starting salary $15,000 + bnfts. Send resume to: X3113 TIMES

RESTAURANT MANAGER
Resort area in South Carolina, moncake house. Call Mr West (212)697-3648

RSTRNT-HDWAITER 5 pm-1
$845+ Albert Agency 250 W 57 St

RSTRNT-Exp Bkkpr $10,400
ALBERT AGENCY 250 WEST 57 ST

RSTRNT-Food Service Mgr Fee paid
College food exp kniste coats Rklyn/NJ To $16K. Albert Agency 250 W 57 St


RESTAURANT
COOK-DELI PERSON

Atlanta's newest & most charming kosher-style delicatessen has immediate opening. This person will play an important role in a large volume operation so must have productive years of deli experience, must be proficient in all phases of deli operation. Our restaurant is located in the heart of the South's most exciting city. If you're an experienced deli person looking for a new challenge, unlimited opportunity & superb working conditions then you're a person we'd be interested in. Salary open. X3203 TIMES

RESTAURANT FAST FOOD
MANAGERS
(ALL LEVELS)

NATHAN'S FAMOUS offers the qualified & experienced candidate a promising career in the fast food field.

Car necessary. Salary open. Liberal co benefits + monthly performance award

CALL FOR APPOINTMENT 9-5PM
NATHAN'S FAMOUS, INC.
PERSONNEL DEPT 847-0600

RESTAURANT MGT F/PD to $13M
Assistant mgr for growing chain of turnpike feeders. Experience with family style waitress service chain operation required. Good growth to $18M+ as a manager based on performance. Relocation paid. Interview soon!

ROTH YOUNG
43W42 Agency (212)869-0300
Nations Largest Food Specialist
25 Offices Coast-to-Coast

4. Classify jobs according to Groupings:

   a. Degree of experience needed
   b. Educational requirements
   c. Salary

5. Maintain an ongoing record of availability of foods-related occupations locally. Using a bulletin board or chalkboard, have a committee of students assume the responsibility for posting foods-related want ads. Chart the trends.

6. Assignment #II on assignment sheet. Students report findings to the class.

7. Speaker.

Evaluation:

1. Quiz on terms found in employment ads.

2. Students collect and categorize and mount foods-related occupations.

3. Students diagram levels of job opportunities in food-service establishment or supermarket.

4. Describe 1, 2, or 3 job opportunities in depth.

Topic B – Selling Yourself

Specific Objectives:

1. The student will list personal qualities and skills which would be an asset in obtaining and maintaining employment.

2. The student will identify and discuss areas of improvement in personal qualifications for work.

Procedures:

1. Speaker to discuss characteristics and qualities of employees. Speaker may be from Guidance, welfare board, unemployment bureau, employers.

   a. Students prepare questions on note cards before speaker arrives.

   b. Teacher outlines objectives of discussion with speakers.

2. Self-evaluation checklist. Student-teacher conferences.

3. Assignment III on foods-related occupations assignment.

HOME ECONOMICS DEPARTMENT

GENERAL WORK HABITS CHECK LIST

Name _____

	Never	Occasionally	50% of the Time	Frequently	Almost Always
1. Shows initiative					
2. Retains skills					
3. Follows directions					
4. Requires little supervision					
5. Completes tasks					
6. Works quickly					
7. Is safety conscious					
8. Asks for more materials when needed. Knows where materials and equipment are located.					
9. Indicates when he/she does not understand, seeks advice from the instructor.					
10. Recognizes his/her errors					
11. Corrects his/her errors					
12. Adjusts to new jobs easily					
13. Is not easily distracted from work					
14. Keeps work area clean					
15. Gets along well with peers					
16. Relates well to authority					
17. Accepts criticism					
18. Respects private & public property					
19. Is neat with work					
20. Is well groomed					

	Never	Occasionally	50% of the Time	Frequently	Almost Always
21. Is punctual; can be depended upon					
22. Has leadership qualities					
23. Avoids absenteeism					
24. Uses time wisely					
25. Makes effective decisions					
26. Does menial and routine tasks without complaining					
27. Works to full potential					
28. Assumes responsibility					
29. Takes pride in work					
30. Is a cheerful worker					

Topic C – Further Training Opportunities

Procedure:

1. Quest Activity. (pg. 100)
2. Collect and maintain files on schools where culinary and hotel-motel management programs are offered.
3. Field trip to community college or culinary school.
4. Field trip to Restaurant Association Convention, New York City.
5. Speaker(s)-demonstration. Students from culinary school (past graduates if possible).

Evaluation:

Student research, reports.
Role play job interviews.

Resources:

Cornelius, Ethelwyn, *Food Service Careers*, Peoria, Ill.: Chas. A Bennett Co., Inc. 1974.

U.S. Dept. H.E.W. and U.S. Dept. of Labor. *Vocational Education and Occupations*, Washington, D.C.: U.S. Gov't Printing Office, 1969.

U.S. Dept. H.E.W. *Training Food Service Personnel,* Washington, D.C.: U.S. Gov't. Printing Office 1969.

U.S. Dept. Labor. *Occupational Outlook Handbook,* Washington, D.C.: U.S. Gov't. Printing Office 1974.

U.S. Dept. of Labor. *Dictionary of Occupational Titles,* Vol. 1, Washington, D.C.: U.S. Gov't Printing Office 1965.

FOODS RELATED OCCUPATIONS ASSIGNMENT

Name _____

I. Look in want ads; clip and mount as many different foods-related occupations as you can find.

II. a. Study in depth one foods-related occupation including:

a brief description of the job
the training or preparation needed
personal qualifications
pay
opportunities for advancement
employment outlook

or

b. Interview a person in a foods-related occupation. Ask about:

what the job involves
training or preparation needed
personal qualifications desired
an approximate pay range
opportunities in the field

III. a. Obtain a job application form and complete it yourself as though you were applying for a job.

or

b. Make a list of your attributes for job success and another of areas where you feel a need to improve in order to obtain and maintain a good job.

or

c. Write a resume in response to a want ad explaining why you feel you are qualified for the job.

QUEST: Compile a list of names and addresses of schools in this country where a person may receive further preparation for foods-related work.

UNIT 14 – EFFICIENCY

Objectives: At the conclusion of this unit the student will –

Demonstrate efficient procedures in foods work

Given a menu/recipe the student will formulate an efficient work plan.

The student will be able to plan a kitchen-work center based on an understanding of efficient procedures.

Topics:

A. Basic efficiency in the kitchen
B. Efficiency practice
C. Planning a kitchen
D. Efficiency and Management

Topic A – Basic Efficiency in the Kitchen

Objectives: The student will identify and list efficient procedures in foods work.

The student will evaluate menus in terms of efficiency in procedures involved.

Given a menu/recipe the student will formulate an efficient work-plan.

Procedure:

1. Students use worksheet on efficiency.

2. Discuss and present examples of general efficiency principles: (or have students look up)

   a. Plan procedures
   b. Eliminate unnecessary steps
   c. Use two hands when possible
   d. Dove-tail tasks
   e. Use slower sweeping motions
   f. Alternate activity and rest periods.

3. Discuss principles of efficiency specific to foods work:

   a. Read entire recipe
   b. Plan procedures carefully
   c. Assemble measured ingredients
   d. Assemble proper utensils
   e. Use proper utensils, use utensils properly

f. Clean as you work
g. Eliminate unnecessary steps
h. Store ingredients and utensils properly

4. Using brownies as an example have students plan for their preparation. Let teams of students plan and execute trial one. Record time each group took from start to in-the-oven-time. Evaluate.

5. Plan trial two, same recipe. Aim for preparation-time to be not more than 12 minutes. Discuss ways to accomplish this. Run trial two. Student observers may be selected to evaluate efficient and inefficient procedures.

6. Discuss – demonstrate the use of efficient procedures as:

   a. Using a rubber scraper
   b. Using a wooden spoon
   c. Using a wire whip
   d. Chopping walnuts

7. Make a collection of efficient household hints – post on bulletin board.

8. Students evaluate menus/recipes.

Evaluation:

1. Observe efficiency of student at work.

2. Efficiency quiz/Test

3. Efficiency worksheet.

STUDENT LAB SHEET

Efficiency **Name** _____

Efficient procedures are desirable in foods work. Working conditions, morale, and quality of product are all affected by the degree of efficiency employed by the worker. For these reasons it is important to discover ways in which to improve work habits.

Objectives: Discover and develop efficient practices in food preparation.

Discover the value of using efficient practices in food preparation.

Menus:

1. Explain why the following menu is poor in terms of efficiency. How might it be improved?

Pineapple juice with orange sherbet
Cream of chicken soup
Broiled Sirloin Steak
Broccoli with hollandaise sauce Mashed potatoes
Tossed salad
Warm rolls with butter
Baked Alaska

_____

_____

_____

2. Plan a menu which would provide for efficiency in its preparation.

Related Information:

1. What is the difference between speed and efficiency? *(Speed involves rate only. Efficiency requires the use of the least energy to do the most effective job.)*
2. What is meant by dovetailing tasks? *(Alternating activities, beginning several jobs and completing them all on schedule. Example: put coffee on, start bacon, set table).*
3. List several suggestions for efficiency that apply to tasks in general.
   (Use as few motions as possible. Cut down unnecessary trips or tasks. Use two hands. Use circular motions. Use steady pace but rest when necessary)
4. List specific suggestions for efficient procedures in food work.

   (Wipe spills immediately, as they occur.)

   (Clean as you work.)

   (Use rubber scraper when emptying batter or other substances from containers.)

   (Wooden spoons are efficient for stirring hot mixtures.)

   (Work in assembly line fashion left to right if right handed.)

   (Store utensils at their place of first use.)

   (Store spices alphabetically.)

   (Return lids to containers and store immediately after using.)

5. Summarize two trials involving food preparation; one you performed, and one which you observed.

TRIAL ONE _____ (Product) _____ (Time) _____ (Prepared by)

Efficient Procedures	Inefficient Procedures

TRIAL TWO _____ _____ _____

Product Time Prepared by

Evaluation:

Topic B – Efficiency Practice

Objectives: Given a menu/recipe the student will plan for its preparation and demonstrate efficient work procedures in preparing it.

The student will evidence an understanding of efficient procedures in evaluating his work and the work of others.

Procedures:

1. Have students plan and prepare foods/menus using efficient techniques. The following are examples:

   a. quick coffee cake – crumb topping
   b. menu of orange juice, French toast, bacon, hot chocolate
   c. Spanish rice
   d. pineapple upside down cake

Evaluation:

Observe and rate student performance.

STUDENT LAB SHEET

Efficiency Rating Scale – Foods Name _____

Product _____

Kitchen _____

1. Write a brief summary of your experience pointing out your own responsibilities and the effectiveness of your group as a whole.

2. Rate your group on the following points.

5 is the best; 1 is poorest; 0 = don't know

	Circle	Why you said so
Planning (knowing what to do ahead of time)	0 1 2 3 4 5	_____
Timing (meeting schedules)	0 1 2 3 4 5	_____
Organization (who does what)	0 1 2 3 4 5	_____
Clean as you work	0 1 2 3 4 5	_____
Product quality; uniformity; flavor	0 1 2 3 4 5	_____
Final clean up	0 1 2 3 4 5	_____

3. Using the same product, write up a revised time and organizational plan for your kitchen beginning at 9:05, ending at 9:45.

Time	Activity	Person

UNIT TEST

Efficiency **Name** _____

Figure the following, giving measurable quantities as answers:

1. a. 1/2 of 1/3 c = ans. *(2T + 2 tsp)*
2. b. 1/2 of 3/4 c = ans. *(1/4 c + 2T)*

2. Name several uses for:
   a. a rubber scraper *(cleaning batter from bowls, folding in)*
   b. a slotted spoon *(frying, lifting vegetables from juice)*
   c. a metal spatula *(frosting cake, lifting cookies from pans)*
3. For what purpose is each of the following used? List more than one purpose if it applies.
   a. pastry blender *(cutting in shortening in dry ingredients)*
   b. egg beater *(making liquids, egg mixtures, light batters)*
4. Why is a wooden spoon an efficient utensil to use for beating?
   (It is paddle-like; it does not scratch utensils. It is good for hot mixtures, as it does not conduct heat.)
5. Give four reasons for reading a recipe thoroughly before beginning to follow it.
   a. *(Plan time)*
   b. *(Determine whether you have all ingredients)*
   c. *(Determine whether you have all skills needed)*
   d. *(Plan procedures – special equipment)*
6. Answer the following questions using the Better Homes cookbook.
   a. pg. 177 Coconut kisses – In what bowl would the egg whites be beaten?
   b. pg. 179 Butterscotch cookies – What container or bowl would be the best choice for efficiency in which to mix the ingredients? *(mix in the saucepan)*
   c. pg. 185 Scotch shortbread – How is the cookie sheet prepared? *(ungreased)*
   d. pg. 85 Perfect white bread – How long will it take to prepare? *(3½ hours)*
   e. pg. 111 Everyday cupcakes – Name the dry ingredients.

f. pg. 112 – Mocha chiffon:

Which bowl for the egg whites? *(medium)*

When is the flour "added"? *(flour is folded into egg whites)*

To what ingredients is the salad oil added? _____

How long will the entire procedure take? _____

Topic C – Planning a Kitchen

Objectives: The student will identify traffic patterns in work areas.

The student will apply the principles of efficiency in planning kitchens for private homes.

The student will examine and evaluate commercial management of space and work areas.

Lessons:

1. Discuss (brainstorm) activities which occur in kitchens. List these on board:

   Menu Planning
   Food Preparation
   Baking
   Washing Dishes
   Eating
   Food Storage
   Equipment Storage
   Cleaning
   Cutting Vegetables and Fruit
   Food Service

2. Then establish the needs of a kitchen in terms of major appliance-work-areas:

   Storage – pans, equipment, dishes, food
   Food Preparation – sink,refrigerator
   Cooking – range, appliances – toasters, fryers
   Serving – counters, dishes, serving dishes, paper goods
   Cleaning – cleansers, mops, soaps, storage areas, washing machine for linens.

3. Using an overhead projector or charts show several models for kitchens, taking into account the activities:

   One-Wall Kitchen

L-Shaped

Parallel

U-Shaped

Chart and discuss traffic patterns, efficiency.

4. Discuss work areas in commercial establishments. Include all units of concern:

Back of the House
- Storerooms
- Preparation Centers – salads, desserts, sauces, grill, pastries, soups, vegetables
- Dishwashing Area
- Steam Tables
- Pantry

Front of the House
- Reception Area
- Dining Area
- Coat and Rest Rooms

5. Using graph paper, students plan a kitchen for either a home or commercial situation; or evaluate existing plans in these situations.

Additional Activities:

6. Calculate the cost of equipping a kitchen by listing the equipment needed, pricing each item, and totaling the amount.

7. Visit a restaurant and diagram the work areas and floor space. Mark traffic flow.

Evaluation:

Students plan kitchens.
Students evaluate kitchens in floor plans, model homes, commercial establishments.

Resources:

Cornelius, E. *Food Service Careers,* Ill.: Chas. A. Bennett, 1974.

Shank, Fitch, Chapman. *Guide to Modern Meals,* New York; McGraw Hill.

U.S. Dept. of H.E.W. *Training Food Service Personnel,*

Topic D – Efficiency and Management

Objectives: The student will apply principles of efficiency to the management of time, materials, and personnel.

The student will demonstrate a sensitivity to the importance of interpersonal relationships in working as part of a group.

Lessons:

1. Review principles of management and efficiency.

2. Using practical problem situations or case studies such as the planning of work schedules for several people preparing a luncheon.

3. Take a field trip to a restaurant or visit the school cafeteria to observe workers in the process of preparing foods. Note procedures and activities which exemplify the principles of efficiency. Note inefficiency if observed.

4. Interview managers in supermarkets, bakeries, restaurants. Invite a manager to speak to the class. The following questions might be of interest:

   a. How do you determine what worker will do what activity?
   b. How much are workers on their own and how much must they be directed by the manager?
   c. What special provisions are there for worker safety?
   d. What are the characteristics of an efficient worker?
   e. Are there any restrictions on noise, horseplay, personal habits?

5. Consider interpersonal relationships. Ask speaker or interviewer about morale among workers. How important is it that workers get along with each other?

   What qualities does a manager want in a worker?

6. Discuss interpersonal problem situations, e.g., what should you do if you do not get along with a. your fellow worker, b. your boss, c. your subordinate, d. a customer?

7. Students develop and post a list of ethical standards or practices for foods workers.

Evaluation:

Role play situations in which:

a. Workers are having a problem getting along.

b. A customer is giving a waitress a difficult time.

Resources:

U.S. Dept. of H.E.W. *Training Food Service Personnel.*

Cornelius, E. *Food Service Careers,* Ill.: Chas. A. Bennett.

Harris, Ellen. *Professionsl Restaurant Service,* Toronto: McGraw Hill, 1966.

Lateiner, Alfred. *Modern Techniques of Supervision,* West New York: Lateiner Publishing Co., 1968.

Lundberg, Donald and Armatas, James, *The Management of People in Hotels, Restaurants, and Clubs.* Dubuque: William C. Brown Co. 1964.

UNIT 15 – FACT OR OPINION

Objectives: Upon completion of this unit the student will –

Give evidence of having a positive attitude toward new flavors and foods

Express objectivity when sampling and describing food

Evidence a sense of taste discrimination.

Topics:

A. Origins of Taste and Objectivity
B. Taste Testing
C. Sampling Objectivity – Poultry

Topic A – Origins of Taste and Objectivity

Objectives: The student will identify 40-70 descriptors for foods.

The student will give evidence of a knowledge of and assent to the need for objectivity in sampling food products.

The student will discuss origins and backgrounds of individual tastes and preferences.

The student will diagram the taste-sensitive areas of the tongue.

Lessons:

1. Distribute lab sheets. Establish objectives, define terms:
   a. Taste discrimination – to identify differences in flavors and textures.
   b. Objectivity – based more on standards which are established by generally accepted criteria rather than being based upon personal preferences.
2. Reinforce the need to eliminate negative comments about foods:
   a. Show Heinz filmstrip "How's Your Sense of Taste?"
   b. Have a student read to the class Dr. Seusse's "Green Eggs and Ham."
   c. Disallow statements such as "yuk, gross, disgusting" and replace with "interesting, different, underdone" or other descriptors.

3. Brainstorm words which are descriptive of foods. Students should be able to accumulate a list of at least seventy-five. Textural terms might include "grainy, coarse, smooth, crunchy, chewy, elastic, spongy"; flavor terms include "tangy, tart, bitter, sour"; taste-odor terms include "musty, strong, bland, spicy, sharp, hot, mild."

4. Students practice describing foods using the terms listed. Describe as though they were talking to someone who had never tasted them. Avoid nebulous terms as "good" and "nice."

5. Open cans of free-stone and cling peaches. Have students taste and describe each type.

6. Label the diagram of the taste-sensitive areas of the tongue. This may be done experimentally by having students do the following:

   a. Blind-fold student.

   b. Use solutions of salt, sugar, vinegar, unsweetened cocoa. Instruct student to touch areas of the tongue with each solution, one at a time. Chart or map the areas identified. This may also be researched in biology books and references.

7. Additional experiment – blind-fold student. Hold nose closed. Have another student feed him/her small sections of apple, and of onion. Blind-folded student must identify which he is eating.

Topic B – Taste Testing

Objectives: The student will apply the principles learned in Topic A to the sampling of several products.

The student will be involved in experimental techniques of product comparison.

Lessons:

1. Several food products will be compared in order to reach the following generalizations:

   a. Taste preferences vary from individual to individual.
   b. Taste discrimination is not always reliable.
   c. Taste preference may be different from brand preference.
   d. Cost is not necessarily related to preference.
   e. Advertising, labeling, and price are influences in choice at the point of sale, but may or may not be actually related to taste preference.

2. Directions for sampling.

   a. Take a vote among the students to determine bias. Give students a sample of lemonade for that portion.

b. Spread bread with four brands of peanut butter. Call them A, B, C, D, but do not reveal brand. Have students sample and rank favorite (1) to least favorite (4). Note: Students must sample and rank without comment to avoid bias. After ranking obtain consensus of group as to the number of times each one is preferred. After preferences are voiced, show brands represented and ask students which they would buy. (Note these votes on the board.) Show prices and ask the question again. Now reveal which brand was which on the taste test. Find out how many people preferred by taste the brand they would have purchased. Discuss the reliability of brand preference.

c. Sample spreads, including butter and a variety of margarines. Be sure to include the lowest priced store brand margarine and the highest priced margarine. In this experiment repeat one sample to show that taste itself is not reliable. After the testing, see how many students ranked the repeated spread more than two rankings apart. Afterward compare results, then reveal types sampled.

d. Apple juice. Ask students to name several brands of apple juice. Write them down as they are recalled. Ask by vote which brand they would purchase. Then have students sample several brands (repeat one) without being aware of the brand being sampled. NOTE: Use cups which are the same color, preferably clear plastic or white, since cups of different colors will introduce bias. Compare student rankings to pre-sampling votes. Is brand preference reliable?

e. Orange Juice. Repeat the experiment, using a variety of brands of orange juice.

STUDENT LAB SHEET

Fact or Opinion **Name** _____

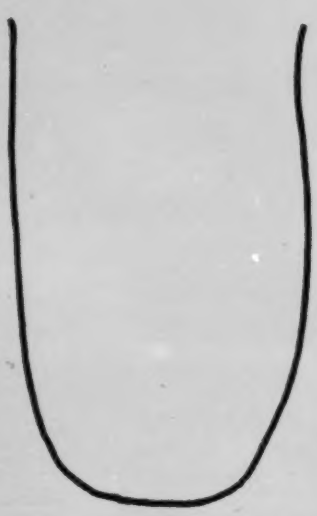
Objectives: To develop a sense of taste discrimination.
To develop objectivity in describing food and evaluating it.
To develop an objective attitude toward food.

1. Make a list of forty words by which foods may be described. (alphabetize or group the words for your future reference according to classifications; texture, flavor, etc.)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Use two or three or as many of the words above as you can to describe:
   a. mashed potatoes
   b. walnuts
   c. an orange
   d. canned peas
   e. cheese soufflé
   f. celery

3. THE TONGUE



   a. Label the portions which taste:
      salt
      sour
      sweet
      bitter
      nothing

b. Upon what does the remaining sense of taste depend?

4. Summarize several points from the filmstrip: "How's Your Sense of Taste?" Heinz Corporation.

5. Problems

a. Opinions differ.

Statement	# Yes	# No	# ?
Butter tastes better than margarine			
Canned peas taste better than frozen			
The lemonade is too sweet			
The lemonade is too sour			
The lemonade is just right			
Totals			

b. Brand Preference – Is it reliable?

Peanut butter Brand	Rank	Price	# times preferred in trials

Brand	sight preference rank

c. The butter–margarine preference.

Verbally: How many prefer butter to margarine _____

margarine to butter _____

have no preference _____

Test:

Type	Identified as butter	Rank	Comment
A.			
B.			
C.			
D.			
E.			
F.			
G.			

d. Apple Juice – Is the most popular brand most preferred?

Tester's reaction	Rank	Price	Product
A.			
B.			
C.			
D.			
E.			

e. Orange Juice and Orange Juice products – frozen

Product	Contents	Price	Description	Rank
A.				
B.				
C.				
D.				
E.				
F.				

Evaulation, Conclusions:

Topic C – Sampling Objectively – Poultry

Objectives: The student will prepare the assigned variety of chicken accurately.

The student will sample several different chicken dishes objectively and demonstrate a positive attitude.

The student will define and describe forms of poultry, procedures for cooking chicken, and means of selecting and storing it.

Lessons:

1. Discuss the need for evaluating food objectively, according to objective criteria, considering other foods to serve with it. Maintain a positive attitude despite personal preferences.

2. Distribute Chicken Sampling Lab worksheet. Establish objectives and procedures.

3. Students plan for and prepare a variety of chicken dishes. Conduct an orderly and objective sampling session. Students plan menus around sampled items for practice.

4. Research and review worksheet related information: Vocabulary

STUDENT LAB SHEET

Chicken – Sampling **Lab #** **Name** _____

Objectives: Develop the ability to sample and evaluate food objectively
Follow directions and procedures successfully
Exercise a well-mannered approach in a sampling session

Menus:

a. Select three of the products you tasted in class. Plan a menu for each.

(1) (2) (3)

b. Which of the products prepared in class would not be served with each of the following:

lettuce and tomato salad *(products containing tomatoes)*

creamed onions *(products containing onions or white sauce)*

Recipes: Barbecued Chicken, Coq au Vin, Chicken Cacciatore, Batter-Fried Chicken, Chicken Fricassee.

Related Information: (Students research, derive, discuss)

1. Vocabulary
   a. broiler, fryer
   b. capon
   c. roaster
   d. fowl
   e. Cornish hen
2. Vocabulary review (Definitions available in most cookbooks and texts.)
   a. par-boil
   b. braise
   c. fricassee
   d. simmer
   e. broil
   f. boil
   g. barbecue
   h. dredge

3. **Buying guides**

a. **Chart the comparative prices:**

	Price per pound
Whole fryers	
Quarters or pieces	
Breasts	
Legs, thighs	
Wings	

b. What regulations govern the inspection of chicken (poultry)? What does the inspection seal tell the consumer? Draw the seal and explain. *(USDA)*

c. How should chicken be stored? *(Remove store wrapper – store in refrigerator.)*

(Freezer— wrap and freeze)

UNIT 16 – BASIC NUTRITION

Objectives: Upon completion of this unit the student will –

Discuss the four basic food groups to be included in the daily diet

Analyze and evaluate personal food habits and patterns.

Lessons:

1. Instruct students to keep a record of their eating for three consecutive days. Use Student Food Record sheets. Note: This assignment should be made several days prior to the study of the basic four food groups.

2. Present the basic four food groups using charts, food models, or other visuals. Have students complete the first two columns of the basic four food groups summary.

3. Students analyze their own eating records by identifying which group is represented by each food eaten, by adding up the total number of servings for each group, and entering the totals in the appropriate spaces.

Additional Activities and Evaluation:

4. Locate a copy of a current diet (fad), and analyze it according to your knowledge of nutrition. What would be the effects of remaining on the diet for an extended period of time? Current issues of women's magazines may be a good source of information on current diets.

5. Write a summary of the effects of cholesterol on the body after researching the subject in several sources.

6. Conduct a brief study of food additives. Identify more commonly used additives and consider their use or function, and possible effects.

7. Do a comparative study of a specific group of foods, considering cost and nutritive content. Examples of items might be:
   3 kinds of frozen pizza
   6 kinds of crackers
   3 convenience foods

   List the weights, costs and ingredients of the products. Sample if possible. Analyze the food in relation to the factors mentioned.

8. Clip and comment briefly on four articles in the newspaper concerning nutrition or food and health.

9. Do a study in depth of one of the nutrients.

10. Read three cereal labels. What information concerning nutrition and the nutritive value of the cereal is given? What are the claims made? Cut out and mount the information if possible. Comment on the information you found.

11. List eight foods to which nutrients have been added as indicated on the labels. List the specific nutrients which have been included. You might use a chart form such as:

Name of Food	Nutrients added

or you may make a check list of the nutrients and list the foods checking the nutrients when they appear on the labels:

Food	Iron	Niacin	Riboflavin	Thiamine	Vitamin C	etc.

What can you conclude about the nutrition of Americans in light of the information you found?

12. Research the specific effects of overdoses of nutrients. Cite the examples found.

STUDENT LAB SHEET

Food Records Name _____

Record the food you eat for three days. Be accurate, indicating specific amounts and items.

	Day 1	Day 2	Day 3
Foods I ate for Breakfast:			
Snacks:			
Foods I ate for Lunch:			
Snacks:			
Foods I ate for Supper:			
Snacks:			

STUDENT LAB SHEET

Basic Four Food Groups **Name** _____

Summary

1. Complete the first two columns in the chart below. Then place the number of each food group represented next to each food entered in the 3-day food record. Count up the servings in each group for each day and enter the totals in the last three columns.

Group	Recommended Daily Amounts	Total Servings Day 1	Total Servings Day 2	Total Servings Day 3
Group 1				
Group 2				
Group 3				
Group 4				

2. Which groups were adequately represented for all three days?

3. Which groups were inadequately represented for all three days?

4. What are some conclusions and recommendations you have concerning your diet?

UNIT 17 – MENU PLANNING

Objectives: Upon completion of the unit the student will –

Be able to analyze and critique menus according to the principles of effective menu planning.

Plan menus that are nutritionally adequate and aesthetically satisfying.

Construct menus that correspond with a variety of life styles.

Lessons:

1. Distribute sheet: "Guide for Planning Meals".
    a. Discuss guides and give illustrations.
    b. Review the basic four food groups.
    c. Discuss and plan menus using the basic menu patterns. Use food models or food pictures to construct visual "meals".
2. Have students create menus around given food items. Plan menus for specific events: birthday party, men's luncheon.
3. Examine menus (See Sample Menus for Analysis) to identify combinations which meet the criteria suggested in "Guides to Planning Meals." Analyze menus using Menu Planning Analysis Chart. (pg. 130)

Additional Activities:

4. Collect and explore restaurant menus for interesting variations and combinations.

Evaluations:

1. Students analyze menus.
2. Students create menus around given foods.
3. Menu planning problems – evaluation.

Resources:

Amendola, Joseph. *Practical Cooking and Baking for Schools and Institutions,* New York: Ahrens Publishing Co.

Better Homes and Gardens Menu Cookbook

Blevin and Giner. *The Low Blood Sugar Cookbook*, New York: Doubleday, 1973.

Brown, William C. *Food Service in Industry and Institutions*, Dubuque: Wm. C. Brown Company.

Cornelius, E. *Food Service Careers*. Ill.: Bennett, 1974.

Dahl, Crete. *Food and Menu Dictionary*, Boston: Cahners Books.

De Knight, Freda. *The Ebony Cookbook – A Cookbook of American Negro Recipes*, Chicago: Johnson Publishing Co., 1972.

Fowler, *Food for Fifty*, New York: John Wiley and Sons, Inc., 1971.

Neill, *Food With a Foreign Flair*, New York: Barnes, 1970.

Restaurant Menus

Weaver, Ann. *Planning Meals and Shopping*, Belmont, Ca.: Fearon, 1970

GUIDES FOR PLANNING MEALS

1. Plan according to the family economy.
2. Choose methods of food preparation suitable to the persons being served.
3. Plan menus that can be prepared in the time available.
4. Include some foods that do not require last-minute preparation.
5. Plan baked foods that require the same oven temperature as others that may be prepared at the same time.
6. Plan colorful meals in which the colors harmonize.
7. Plan for contrast in texture,
   temperature,
   color,
   shape,
   flavor.
8. Use only one or two foods that are difficult to digest in one meal.
9. Serve no more than one strong-flavored or highly-seasoned food at one meal.
10. Plan pleasing combinations of acid, bland, and sweet foods.
11. Do not repeat a food in a single meal.
12. Use natural shapes.
13. Do not introduce two new foods at the same meal.
14. Keep in mind the nutritional aspects of meal planning.

The Basic Four Food Groups

1. Milk, cheese, ice cream – children, four cups milk daily; adults, two cups.

2. Meat, poultry, fish, eggs, dried peas and beans – two or more servings daily.

3. Bread, cereals, grains (whole or enriched) – four servings daily.

4. Vegetables, fruits – all kinds – four servings daily including one citrus fruit and one green or yellow vegetable.

Basic Menu Patterns

Breakfast	Lunch	Dinner
Fruit	Appetizer	Appetizer
Cereal with Milk	Main Dish	Main Dish
Bread Spread	(Soup, Sandwich, Salad)	Vegetable Salad
Simple Main Dish	Bread Spread	Bread Spread
Beverage	Dessert	Dessert
	Beverage	Beverage

Sample Menus for Analysis

1. Apple Juice
Meat Loaf with Tomato Sauce
Boiled Potatoes Green Beans
Whipped Gelatin
Beverage

2. Shrimp Cocktail
Roast Beef
Stuffed Baked Potato Green Beans
Pineapple Cheese Cake
Beverage

3. Fruit Cup
Cheeseburger
French Fried Potatoes
Corn Carrot Strips
Ice Cream with Animal Crackers
Milk

4. Tomato Clam Juice
Veal Parmesan
Caesar Salad
Roasted Whole Potatoes
French Bread
Apple Pie with Cheese Slice
Tea Coffee

5. Minted Citrus Juice
Individual Cheese Soufflé
Asparagus Orange & Grapefruit Salad
Biscuits Herb Butter
Baked Alaska
Demitasse

6. Cranberry Juice Cocktail
Broiled Steak
Buttered Corn Tossed Green Salad
Brown'n Serve Rolls
Ice Cream
Coffee Tea

7. Melon Ball Cocktail
Prime Ribs of Beef
Stuffed Artichokes Scalloped Potatoes
Warm Yeast Rolls
Steamed Chocolate Pudding
Coffee Milk Tea

8. Ambrosia
Roast Chicken, Giblet Gravy
Mashed Potatoes Broccoli with
Hollandaise sauce
Warm Rolls Butter
Baked Alaska
Coffee Milk Tea

9. Orange Sherbet in Pineapple Juice
Meat Loaf
Baked Potatoes Buttered Peas
Crusty French Bread Butter
Cherry Cobbler
Coffee Milk Tea

10. Consommé
Spaghetti with Marinara Sauce
Perfection Salad
Warm Rolls Butter
Chocolate Pudding
Coffee Milk Tea

11. Hearts of Celery
Shrimp Salad
Potato Chips Carrot Sticks
Hard Rolls Butter
Cookies
Iced Tea

12. Old Fashioned Beef Stew
Lettuce Wedge
Thousand Island Dressing
Corn Bread
Blueberry Pie with Whipped Cream
Coffee Milk Tea

13. Marinated Herring
Lobster Newburg
Lyonnaise Potatoes Scalloped Corn
Lemon Soufflé
Coffee Milk Tea

14. Shrimp Cocktail
Filet Mignon Mushroom Sauce
Stuffed Baked Potato
Artichoke Hearts Sauté
Marinated Asparagus
Warm Rolls Butter with Chives
Cheese Cake Supreme
Coffee Milk Tea

15. Cup of Pea Soup
Broiled Hamburger Pattie
Buttered Beet Slices Scalloped Potatoes
Sliced Cucumber Salad
Ice Cream Roll
Coffee Milk Tea

16. Tomato Juice
Broiled Hamburger on Bun
Celery Sticks Potato Salad
Chocolate Ice Cream
Coffee Tea

17. Ambrosia
Broiled Lamb Chops
Sweet Potatoes Buttered Corn
Carrot Sticks
Corn Muffins Marmalade
Spicy Pumpkin Pie
Coffee Milk Tea

18. Jellied Madrilene
Chef's Salad
Whole Wheat Bread Butter
Chilled Compote
Coffee Milk Tea

19. Cream of Celery Soup
Broiled Rib Steaks
Mashed Potatoes
Cauliflower au Gratin
Tomato Aspic
Brioche Butter
Rice Pudding
Coffee Milk Tea

20. Chilled Orange Juice
Chicken a la King in Pattie Shells
Peas Rice
French Fried Potatoes
Crepes Suzette
Coffee Milk Tea

MENU PLANNING ANALYSIS CHART

Name _____

Menu	General Reaction	Rules Followed	Rules Violated	Suggestions

MENU PLANNING PROBLEMS

Evaluation

Directions: Select _____ of the problem situations given below and (for each) answer the following questions –

a. What are the factors or special considerations in the situation that will greatly influence what foods will be included in the menu?

b. Plan a menu for the situation.

c. Why did you choose the particular foods that you did?

Situations:

1. A men's luncheon – 12 men will be having lunch from 12:00 - 1.00. Two kitchen workers are available from 9- 2:00.

2. A children's party (Hallowe'en) – 8 children (aged 7-8) for dinner, games, and refreshments. 5:30-7:30.

3. A catered buffet: A buffet dinner (Saturday evening) for 14 couples. Costs should be moderate. Guests are aged 25-35.

4. A ladies' luncheon – 15 women to be served from 12:30-1:30 p.m. The date is April 15.

5. Brunch – open house. A New Year's Morning Brunch from 9:00 until 11:30. 20 guests will be stopping in at different times.

UNIT 18 – CARBOHYDRATES (CHO)

Objectives: Upon the completion of this unit the student will –

Discuss the role and function of carbohydrates in human nutrition.

Prepare crystalline candy successfully.

Prepare yeast bread.

Demonstrate a knowledge of principles and techniques in baking cakes.

Topics:

A. Introduction to Nutrition Study – Carbohydrates
B. Sugars – Candy
C. Cakes
D. Yeast Breads

Topic A – Introduction to Nutrition Study – Carbohydrates

Objectives: The student will identify the forms of carbohydrates, food sources, and discuss functions and deficiency symptoms.

The student will read and interpret a food chart.

Lessons:

1. Distribute the Carbohydrates – Sugars lab sheet. Establish objectives.

2. Complete the chart for carbohydrates:

Carbohydrates	Food Sources	Functions
Forms: Sugars Glucose – used in cells Sucrose – table sugar Fructose – fruit sugar Maltose – grain sugar Lactose – milk sugar Starches	 Syrups, molasses Candies, frostings Breads, cereal products, wheat, corn, rice, oats, potatoes	Energy and Heat CHO foods also contain other important nutrients Deficiency = loss of weight
Cellulose fibers Fibrous	Fruits – bran cereals Fibrous vegetables	Not digested but cleans the digestive tract.

3. Explain the use of:

   USDA Minimum Daily Requirements charts. Students locate examples of MDRs for sex and age group.

   Food Charts. Concept: The nutritive content of a food may be analyzed and evaluated by
   a. its contribution to a person's MDR
   b. its total food value
   c. its value compared to other foods.

4. Students complete exercises – pertaining to the interpretation and use of food charts – #2 a-d.

   (Note: Calcium 140 gm = 1400 mg.)

CARBOHYDRATES

Topic B – Sugars – Candy

Objectives: The student will apply the principles of preparing crystalline solutions to the preparation of fudge.

The student will read a thermometer accurately.

Lessons:

1. Students research related information in references and resources.
2. Using thermometer diagrams, locate specific temperatures on thermometers.
3. Demonstrate the preparation of chocolate fudge.
4. Students prepare chocolate fudge.
5. Demonstrate non-crystalline peanut brittle.

   Melt 1½ cup sugar slowly in a pan (caramelize) until it is a liquid. Add 1 T. butter, and one pinch of baking soda. Pour over peanuts spread on a buttered pan. Cool. Do not touch, as candy is very hot.

Additional Activities

6. Students experiment with fudge by creating grainy and coarse products – e.g., stir while cooking, stir while cooling.
7. Create or locate and prepare high nutrition candies – cereal candies.
8. Prepare taffy, lollipops, butter crunch, penuche.

STUDENT LAB SHEET

Carbohydrates – Sugars **Name** _____

Objectives: Chart the characteristics, sources, and functions and deficiency symptoms of carbohydrate nutrition.

Read and interpret a food chart.

Prepare crystalline candy – Fudge

Recipes: Fudge, peanut brittle. Begin a collection of candy recipes.

Related Information:

1. Complete the following chart: (Information from available texts)

Nutrient	Sources	Function or Deficiency Symptoms
Carbohydrates		

2. Study a food chart to learn how to read and interpret it. Answer the following questions:
   a. What is the daily minimum requirement for a 17 year old boy/girl of:

      Vitamin C _____ Calcium _____

      Protein _____ Iron _____

   b. Name a food particularly high in Vitamin A _____

      Name a food very low in Vitamin A _____

   c. Name two foods that contain no nutrients other than calories (CHG)

      _____ _____

d. What must an individual eat in one day in order to obtain the minimum requirement of each of the following nutrients? List name and amount of food and number of units (i.u, grams, mg.) provided by each quantity.

Calcium	Units	Vitamin A	Units	Vitamin C	Units
Total					
Total minimum					

3. What is the nutritive value of candy?

   (This depends upon the ingredients. Most candy is primarily CHO in the form of sugar. Some candies contain cereal, fruit such as raisins, and nuts; this adds slightly to their nutritive value.)

4. What is the difference between crystalline and non-crystalline candies. Give examples of each.

   (Crystalline candies are made from supersaturated sugar solutions. There are controls used to determine the fineness of crystals. Rock candy, fudge, and penuche are examples).

   (Non-crystalline candies are lollipops, nougats, fondants.)

5. What form of brown sugar should be used when the recipe merely states "brown sugar"?

   (Generally, light brown, unless the stronger flavor of dark brown sugar is desired).

6. Chart the temperatures and tests for syrup and candies. *(Available in cookbooks and texts.)*

Temperature	Cold Water Test	Examples of Confection Products

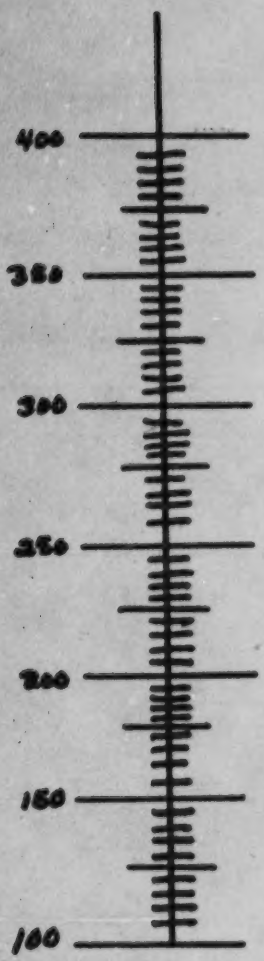
7. How would you substitute cocoa for chocolate in making fudge?
(3-4 tbsp cocoa + 1 tbsp fat for each square of chocolate)

8. What are the most critical periods in making fudge? What precautions are given for the prevention of crystals?
   a. *(Cook to proper temperature –234°F. – cook without stirring.)*
   b. *(Cool without stirring.)*
   c. *(Beat while cooling to keep crystals fine; to prevent large nuclei from forming.)*
   d. *(Pour at the moment that the fudge thickens and loses its gloss. Corn syrup is sometimes added to minimize crystalline development.)*

9. Vocabulary:
   Confection *(candy)*
   Confectioner *(candy maker)*
   Confectioner's Sugar *(candy maker's sugar – 10X powdered)*
   Nougat)
   Penuche) *Students look up and derive*
   Praline)
   Marzipan)
   Semi-sweet chocolate *(block and chip forms – bittersweet)*
   Dipping chocolate *(chocolate used to cover candies)*

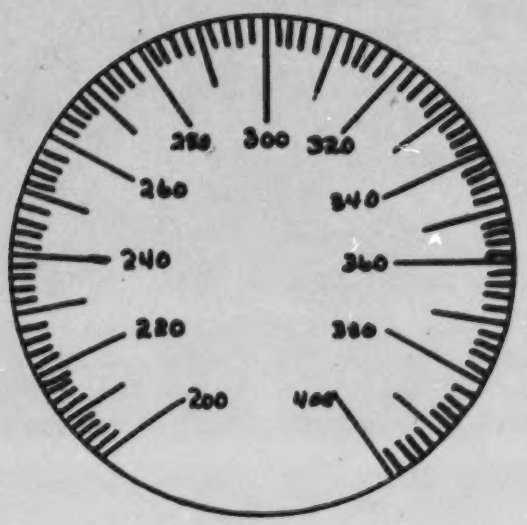
Evaluation: Evaluate the entire experience in terms of the objectives that were established: include incidental learnings as well. Use a separate page.

THERMOMETERS



Deep Frying

Candy



All Purpose

10. Observe on candy wrappers and list the names of candy manufacturers. What candies do they prepare?

Manufacturer and Location	Candy	Weight	Price

11. Invite a candy maker to the class or visit a homemade candy establishment to observe candy being made. Explain identifying marks on chocolates.

Topic C – Cakes

Objectives: The student will prepare and frost a basic batter cake.

The student will compare the ingredients, procedures, and characteristics of a variety of types of cakes.

The student will conduct a comparative study of several cake products.

The student will identify and describe equipment and procedures used in cake making.

The student will determine causes of problems in the preparation of cake.

Lessons:

1. Distribute lab sheets; establish objectives and procedures.
2. Demonstrate, discuss, and students research and derive definitions and descriptions of forms and types of cakes and utensils.
3. Show filmstrip "Beautiful Cakes", Betty Crocker. Review functions of ingredients in cakes.
4. Demonstrate cake preparation – butter cake.
5. Students plan for and prepare butter cakes. Frost. Evaluate results.
6. Students and teacher study recipes for sponge, chiffon, Angel, Butter cakes.

   Identify proportions of ingredients and analyze. Students speculate from proportions and ingredients as well as the method, what characteristics each type would have.
7. Students prepare each type for sampling. Compare and evaluate results.
8. Comparison shop and sample homemade cake, mix, bakery cake, frozen.

Additional activities:

9. Conduct experimental session in which ingredients are changed in proportion and techniques to create specific problems are used. Evaluate the results.
10. Interview a baker or visit a bakery to find out how the organization is set up for work. How does a baker know how many cakes to prepare in a given day? What other jobs are there in a bakery?
11. Have a cake decorator show the class his skill.

STUDENT LAB SHEET

Carbohydrates - Cake **Name** _____

Objectives: Compare several varieties of cakes.
Practice techniques of cake making
Conduct comparative study
Exhibit concern for appearance of final product
Follow instructions carefully

Recipes: Attach

Related Information:

1. Complete the Student Lab Sheet – Cakes.
2. What is meant by an empty calorie food?
   Give two examples: _____ _____
3. Calculate the cost of the ingredients in the butter cake you prepared.

Ingredient	Cost per unit	Amount called for	Price

4. Compare the following products:

Product	Cost	Evaluation
Homemade cake		
Cake mix		
Bakery cake		
Frozen prepared layer cake		

STUDENT LAB SHEET

Cakes **Name**

1. What is the nutritive value of cake?

   (Depends upon ingredients – students research and derive response.)

2. Describe each of the following forms of cakes, indicating examples or uses:

   (Discuss – derive definitions)

   Layer cakes

   Loaf cakes

   Cupcakes

   Sheet cakes

   Upside down cakes

   Tube cakes

   Jelly roll

3. Describe each of the following, include special points where they are pertinent:

   (Teacher show, discuss. Students derive.)

   Glass cake and pie pans

   Spring form pans

   Tube pan

   Oblong pan

   Jelly roll pan

4. What is the function of each of the following ingredients in cakes?

   Flour *(framework – discuss gluten formation)*

   Leavening agents *(provide air which expands in heated oven, causing product to rise.)*

   Shortening *("shortens" strands of gluten – tenderizes)*

   Sugar *(sweetens, browns by caramelizing in heat of oven)*

   Eggs *(provide richness, acts as leavener when beaten)*

   Milk *(helps form framework – activates leavening agent)*

5. Study and describe the following classifications of cakes:

   (See also Cake Comparison Sheet)

   A. Cakes containing shortening:

      1. Butter cakes *(Students derive)*

2. Yellow or gold cakes

3. White cakes

B. Cakes without shortening:

1. Sponge cakes

2. Angel cakes

C. Cakes using oil – Chiffon

6. Briefly describe the following methods of mixing cakes: *(study, derive, discuss)*

A. Conventional method

B. Sponge method

C. Quick method

7. a. Why should the oven be preheated when preparing cakes?

(Uniform temperature causes uniform expansion, controls leavening action)

b. How should pans be measured for size? *(Diameter – rim to rim)*

c. How should pans be prepared? *(As directed, some greased and floured, some ungreased, some with waxed paper.)*

d. How should pans be placed in the oven?

(Not touching each other or sides of oven.)

e. What is the procedure for adding milk "alternately with flour"?

(flour – milk – flour – milk – flour; begin and end with flour)

f. What is meant by "folding in"? What are the directions?

(blending ingredients carefully to avoid collapsing or over mixing base – use rubber spatula)

g. How is a cake tested for doneness?

(Research and discuss several methods)

h. What substitution can be made in recipes calling for cake flour?

(7/8 cup all purpose flour for each cup cake flour called for)

8. Chart some common causes of cake failure: (Research and discuss)

Problem	Cause

9. What are the instructions for frosting a layer cake?

(Brush off crumbs – place lower layer upside down – frost, place upper layer on top – frost sides, frost top.) *(Students research ideas for decorating.)*

Who supposedly said "Let them eat cake", and under what circumstances?

(Marie Antoinette – French Revolution)

STUDENT LAB SHEET

* Cake Comparison Name _____

	Butter	Chiffon	Sponge	Angel
1. Ingredients Proportions Flour				
Leavener				
Shortening				
Sugar				
Eggs				
Liquid				
2. Method				
3. Characteristics "Texture"				

* (Students research – Teacher summarize on overhead projector or chalkboard.)

UNIT TEST

Cakes **Name** _____

Answer the questions thoughtfully and specifically.

1. If a cake recipe called for 2¼ cups of cake flour and you had only all purpose flour on hand, what would you do?

   (Use 7/8 c. all purpose for each cup; 7/8 × 2¼ c = 1¾ c + 1½ T.)

2. What determines the nutritive value of cakes?

   (The ingredients included; proportions of eggs to shortening, and sugar.)

3. Briefly describe the conventional method of preparing cake batter.

   (Cream butter, sugar, eggs. Add dry ingredients alternately with milk.)

4. a. What are two functions of sugar in cake batter?

   (Make the product tender. Brown the crust - caramelize)

   b. What is the leavener in chiffon cake?

   (Beaten egg whites (mechanical).)

   c. What happens if too much baking powder is added to cake batter?

   (It falls – air volume stretches cellular walls too much, causing cake to collapse.)

5. Give an example where the direction "fold in" would be used in preparing a cake. Briefly describe this process.

   (Angel food cake, Chiffon. Use rubber spatula and gently fold mixture into beaten egg whites. Be careful not to break egg white cells.)

6. Give one or two possible causes for each of the following problems:

   a. Failure of the cake to rise or reach maximum volume.

   (too little or too much baking powder)

   b. Overdoneness on one side of the cake.

   (Pans touching – Oven not level)

   c. Dryness of texture.

   (Too much flour)

   d. Toughness

   (Too many eggs)

   e. Coarseness

   (Too cool an oven – Under beating)

7. How should a layer cake be frosted?

(Bottom layer is placed upside down. Brush away crumbs. Spread with frosting. Place top layer right side up. Brush away crumbs. Frost sides, then top. Use triangles of waxed paper under cake to keep plate clean.)

8. What are two methods for testing a cake for doneness?

   a. *(Toothpick comes out clean.)*

   b. *(Top springs back when tapped.)*

9. How is a jelly roll made?

(Prepare sponge cake in shallow oblong pan. Roll up in towel to cool. Unroll, spread with jelly. Re-roll)

10. a. Give an example of an uncooked frosting.

(Butter frosting)

   b. Name and briefly describe one method of preparing cooked frosting.

(Fudge – Boiled)

Evaluation:

Student participation and performance.
Lab sheets
Quiz

Topic D – Yeast Breads

Objectives: The student will review the kinds of leavening agents.

The student will apply the principles of working with yeast in the preparation of yeast bread products.

The student will compare home-baked yeast products with commercially-baked products.

Lessons:

1. Distribute lab sheet "Yeast Breads" and establish objectives, plan schedule.

2. Review leaveners and leavening agents: mechanical, chemical. Introduce yeast as a leavening agent.

3. Show filmstrip from Betty Crocker series called "Breads You Bake with Yeast" or other source. Review the functions of ingredients in baked products and special functions in yeast breads.

4. Review vocabulary words in filmstrips and in demonstrations. Have students describe in their own words or derive from recipe sources.

5. Demonstrate the preparation of a basic sweet roll dough. Sweet roll dough is versatile and will keep overnight in the refrigerator if necessary. Demonstrate rolls, coffee cake, cinnamon rolls, stollen, braids.

6. Students plan for and prepare sweet roll dough products.

7. Students calculate the cost of their products and compare with equivalent commercially-made products.

Additional Activities:

8. Students prepare additional yeast bread products.

Evaluation:

Lab experience and preparation
Lab write-up
Quiz

YEAST BREAD

Objectives: Prepare yeast products of acceptable quality. Describe functions of ingredients in yeast breads.

Recipes: Begin a collection of yeast breads.

Related Information:

1. Review the leavening agents by completing the chart below:

Agent – Description	Examples of use
Baking powder (soda + acid + cornstarch)	quick breads: muffins, biscuits
Baking soda + acid (acid = vinegar, sour milk)	quick breads as waffles
Steam	popovers, cream puffs
Beaten egg whites	soufflé, chiffon cakes
Air – incorporated mechanically	pound cake, pie crust
yeast – microscopic plant	breads

2. What is the function of each of the following ingredients in yeast bread?

   flour – *(structure)*

   sugar – *(food for yeast)*

   salt – *(controls growth of yeast)*

   yeast –*(produces air – leavener)*

   milk – *(liquid for gluten, activates yeast)*

   shortening – *(tenderizes)*

3. Vocabulary:

   eggs – *(adds richness)*

   knead – *(work dough with hands to mix and develop gluten)*

   punch down – *(step in making dough – eliminates air)*

   gluten – *(elastic protein substance that forms when flour and liquid are combined)*

   stollen – *(yeast bread – basic sweet dough with candied fruit, currents, nuts)*

   crescents – *(rolls shaped ☾)*

4. Where may yeast be found in the supermarket? *(usually dairy department)*

   What does the date on a package of yeast mean? *(like film – yeast should be used prior to it)*

5. What precautions concerning the temperatures during the preparation of yeast dough are given? *(Too hot – yeast dies. Too cold – slow growth.)*

6. What was the cost of the yeast product you prepared?

Ingredient	Cost Per Unit	Amount Used	Total
		Yield =	

7. How does the cost of the home-baked product compare with the cost of bakery goods?

8. How does the flavor of the product compare with the flavor of purchased products?

9. What other considerations are there in determining whether to prepare yeast bread at home? *(aesthetics, pride)*

Evaluation:

Performance
Quizzes
Participation
Lab Sheets

QUIZ

Yeast Breads **Name** _____

1. Name the ingredients called for in the sweet-roll dough recipes. (Amounts are not necessary).

(flour)	*(water)*	*(yeast)*	*(eggs)*
(sugar)	*(salt)*	*(shortening)*	*(milk)*

2. List in order the steps in preparing sweet roll dough.

(Combine ingredients)

(knead)

(let rise)

(punch down)

(let rise)

(shape)

(let rise)

(bake)

Bonus:

Why is milk scalded? *(To destroy enzymes that would make dough sticky.)*

What would happen if the liquid used was too hot? *(yeast dies)*

What would happen if the liquid added was too cold? *(slow growth)*

UNIT 19 – FATS AND OILS PASTRIES, AND DEEP FAT FRYING

Objectives: Upon completion of this unit the student will –

Explain the place of fats and oils in human nutrition.

Prepare pastry successfully.

Use deep fat frying procedures safely and effectively.

Topics:

A. Fats and Oils
B. Pie Crust, Pastry
C. Deep Fat Frying

Topic A – Fats and Oils

Objectives: The student will discuss the characteristics, properties, and uses of a variety of fats and oils.

The student will cite sources and functions of fats and oils in the diet.

Lessons:

1. Distribute lab sheets. Establish objectives and develop procedures.
2. Discuss and describe types, characteristics, functions, and deficiency symptoms of fats and oils.
3. Using food charts in resource books, students look up caloric values of fats and foods containing fats. Compare general (total) nutritive values of these foods.
4. Students research vocabulary words, discuss cholesterol in the diet. Students report the results of their research efforts to the class.

Topic B – Pie Crust, Pastry

Objectives: Students will prepare pastry that meets general standards of acceptability.

Students will prepare single crust pies, double crust pies which are flavorful and attractive.

Students will review principles of thickening mixtures and other procedures for making fillings.

Lessons:

1. Have students look over the outline of information concerning pastry.

2. Each student will prepare and bake a single crust. Sample and evaluate for flakiness, flavor and appearance. If student is unsuccessful have him repeat the process until he is successful.

3. Prepare and fill a single crust pie or double crust pie or both. Evaluate result.

Additional Activities:

4. Prepare pie crust using a variety of fats, e.g. lard, shortening, margarine, and oil. Sample and compare the results by flavor, texture, and appearance.

5. Prepare puff pastry products, eclairs, patty shells, Napoleons.

Topic C – Deep Fat Frying

Objectives: The student will maintain accurate and constant temperatures and will employ safe procedures when deep frying foods.

Lessons:

1. Review the procedures and safety precautions for deep frying:

   a. Use steady pan or vessel

   b. Fill to no more than 1/3 full

   c. Heat fat slowly to preserve its quality and prevent decomposition which would yield unpleasant flavor.

   d. Avoid the use of water or wet foods. Add cool or cold foods gradually to prevent temperature drop.

   e. Maintain proper temperature. If the oil is too cool the food will absorb it, if too hot the food will be over-cooked on the outside, and under-cooked inside. Be sure to use the proper thermometer.

   f. Use a basket or slotted spoon for safe removal of food.

   g. Drain fried food on absorbent paper or in the case of french fried potatoes, drain them in the basket.

   h. Should a fire occur, do not douse with water. Cover with a lid or use fire extinguisher.

   i. Keep children away from the area while deep frying is being done.

2. Students prepare fried foods as fritters, potatoes, croquettes, fish, using principles and procedures above.

Additional Activities:

3. Visit pastry shops and fast food eating places: What jobs are available or represented in these establishments? What are the personal and skill requirements? What are the opportunities for advancement?

4. As a project, students simulate a pastry shop or fast food establishment. Sell products to teachers or students with administrative permission.

Evaluation:

Quiz
Student performance
Student participation
Lab write-ups

FATS AND OILS

Frying Pastry

Objectives: Learn about fats and oils as nutrients.
Review deep fat frying.
Learn techniques of handling pastry and preparing pies.

Menus: Plan a menu around each product prepared in class.

Some people say that fatty foods are difficult to digest. What are the facts concerning this statement and what implications does this have for the planning of menus?

(Not difficult, but takes longer, use a balance for satiety value.)

1. Complete the chart:

Nutrients	Sources: Animal	Sources: Vegetable	Functions, Deficiency Symptoms
Fats – solid at room temperature Oils – liquid at room temperature	*(bacon)* *(gravies)* *(meat)* *(butter)* *(cream)* *(ice cream)* *(lard)*	*(margarine–* *(salad oils and dressing)* *(peanut oil)* *(shortening)* *(pastries)* *(nuts)*	Functions = heat and energy carry fat soluble vitamins satiety value supply essential fatty acids protect organs Deficiency symptoms are loss of weight.

2. What are the calorie counts of the following quantities of foods?

2 T butter	_____	1 serving fried chicken	_____
2 T mayonnaise	_____	1 serving chicken (baked or broiled)	_____
1 piece apple pie	_____	2 slices bacon	_____

3. Describe, give prices and examples of the use of each: (Student – teacher, research – discussion)

Type of fat	Description	Price	Use
butter			
margarine			
vegetable shortening			
lard			
vegetable oil			
peanut oil			
olive oil			
bacon fat			

4. What are the directions for deep fat frying?

(Sturdy pan, no more than 1/3 full of fat)

(Heat slowly to proper temperature.)

(Use slotted spoon, lift food gently into and out of fat)

(No water, or splattering will result)

5. a. How should gats be stored? *(In a cool place.)*

   b. How should used fats and oils be cared for? *(Strain and refrigerate.)*

6. Vocabulary: (Students research and discuss as concepts, not definitions.)

Cholesterol – *(Waxy substance – builds up in blood system)*

Fatty acids – *(Nutritionally needed – reason not to cut fats out of the diet.)*

Rancidity – *(Name of condition when fat spoils – deteriorates)*

Sauté – *(Brown quickly in small amount of fat; mushrooms, beef)*

Fat soluble vitamins – *(Dissolve in and found naturally in fats, ADKE)*

Pan fry – *(Brown in small amount of fat.)*

French fry – *(Deep fat fry. Food floats.)*

Melting point – *(Temperature at which substance goes from solid to liquid)*

Decomposition point – *(Temperature at which smoking – burning occurs. Low for butter.)*

Satiety value – *(Ability of food, especially fat, to satisfy appetite.)*

PASTRY

Related Information:

I. Preparation of crust – Tools:

a. pastry blender, fork
b. canvas pastry cloth-stockinette for rolling pin
c. pie tape
d. pans – oven glass, enamel, dull metal pans (shiny metal does not bake undercrust well)
e. pie underliner

II. Preparation of Crust – Methods and Precautions

a. hot water produces crumbly rather than flaky shell
b. solid shortening makes a more flaky crust than does oil
c. overhandling makes the dough difficult to manipulate
d. rolling the dough:
purposes – flattens short strands of gluten into layers, seals in the air which acts as a leavener during baking making the crust light. Directions – roll from the the center out, do not re-roll if possible.
e. pastry has a tendency to shrink during baking, therefore it must gently line the pan:

uncooked pies, ex. pumpkin pie, must have no holes in the shell, or the undercrust will become soggy.

baked pie shells, ex. pudding pies, lemon meringue, must be generously pricked before baking to prevent steam from collecting under the crust causing it to puff.

f. steam vents in the upper crust prevent the steam from collecting under the crust and forming a hollow space underneath.
g. single crusts should be hooked under the pan rim to further prevent shrinking.

III. Crust Variations

a. shortening
lard
oil
butter
b. pastry mix
c. ready-to-roll pastry
d. pre-baked shells
e. cereal and cracker crumb crusts

IV. Special Crust Treatments

a. fork edges
b. fluting
c. novelty edges
d. lattice top
e. cutouts
f. shiny tops – brush with milk before baking
g. sugary tops – moisten top with water, sprinkle with granulated sugar before baking
h. glazed tops – brush with beaten egg or with egg yolk mixed with a little water before baking

V. Fillings

a. apple – standard
   French – crumb topping
   deep dish – prepared in square baking pan
   Dutch apple – cream is poured in slits five minutes before end of baking
b. fresh berry, fresh fruit pies. rhubarb combinations, cranberry, peach
c. canned fruit pies: cherry, peach, pineapple
d. winter fruit: mincemeat (raisins, meat, seasonings) raisin
e. custard – rich with eggs; pecan, coconut, custard, pumpkin – to prevent soggy crust, bake custard alone, bake crust alone, combine
f. meringue – in meringue pies, the meringue is piled on top of the pie filling, then pie is baked according to directions; in chiffon pies, an unbaked meringue is combined with the pie filling and the pie is chilled.
g. cream pies – vanilla, chocolate, fruit flavors, egg nog. Make in baked or cereal crumb crusts.
h. Chiffon pies – chocolate, fruit flavors, butterscotch. Made with gelatin base and meringue.
i. individual pies – tarts
j. turnovers, dumplings – fruit wrapped in pastry
k. French or puff pastry
   French pastry – eclairs, cream puffs
   puff pastry – butter is rolled into the layers of pastry – strudel, patty shells, Napoleons.

VI. Storing Pie

a. crust may be wrapped and refrigerated before or after baking
b. unbaked pie may be refrigerated (slit top crust just before using)
c. baked fruit, mince, and chiffon pies freeze successfully
d. custard or meringue pies do not freeze well
e. pie fillings may be frozen to be put into pie shells later
f. most pies may be frozen for from two to three months
g. custard pie must be refrigerated after baking
h. fruit pie may be kept in ventilated box for two days.

RECIPE – PLAIN PASTRY

	2 crust 9"	2 crust 8"	Single crust 8" or 9"
Sifted all-purpose flour	2 c	1 ½ c	1 c
Salt	1 tsp.	3/4 tsp.	1/2 tsp.
Lard or Shortening	2/3 c.	1/2 c	1/3 c
	2/3 c plus 2T	1/2 c plus 2T	1/3 c plus 1T
Water	1/4 c	3T	2T

Directions:

Measure flour into mixing bowl and mix salt through it. Cut in shortening until shortening particles are the size of giant peas. Sprinkle with water, a tablespoon at a time, mixing lightly with a fork until all the flour is moistened. Gather dough together with fingers so it cleans the bowl. Press dough firmly into a ball.

2 crust pie – Divide dough about in half. Round up larger part on lightly floured, cloth-covered board. Flatten with hand. Roll out not quite 1/8" thick. Keep pastry circular and roll about 1" larger than inverted pie pan. Ease pie pan loosely, being careful not to stretch pastry. Place desired filling in pastry-lined pan. Roll out the dough for top crust. Carefully place on top of filling. Fold extra edge of top under edge of lower pastry. Seal. Flute. Slip top crust to allow steam to escape. Bake according to instructions.

Single crust – in which filling and crust are baked together. After pastry has been eased into pan, fold extra pastry back and under. Flute. Hook points of fluted edge under pan rim. **Do not put holes in the crust.** Pour most of filling into pastry-lined pan. To prevent spilling, place pan on rack in oven. Pour in remaining filling. Bake.

Single crust – baked shell to hold filling which is added after baking. After building up fluted edge and hooking points of edge under pan rim, puncture pastry thoroughly to prevent puffing during baking. Bake until golden brown (475°F. 8-10 minutes). Fill with prepared filling.

UNIT 20 – PROTEINS – MEAT COOKERY

Objectives: At the completion of this unit the student will –

Discuss the place of proteins in human nutrition

Apply the principles of protein cookery to the preparation of a variety of cuts of meat.

Prepare gravy according to acceptable standards.

Broil, braise and roast meat so that it is palatable.

Demonstrate a wholesome attitude toward a variety of dishes.

Compare cuts of meat according to cost, servings, tenderness, cooking procedures.

Calculate cost per serving; calculate cooking time for meat.

Topics:

A. Background – protein nutrition and meat cookery
B. Broiling
C. Gravy
D. Roasting and Leftovers
E. Braising

Topic A – Background – Protein Nutrition and Meat Cookery

Objectives:

1. The student will discuss the role of proteins in human nutrition.
2. The student will identify food sources of complete and incomplete proteins.
3. The student will cite the principles of protein cookery and explain how they are applied to the preparation of meat.
4. The student will identify the components of meats and discuss the relationship of the knowledge of these to the actual selection and preparation of meat.
5. The student will identify the cuts of meat and indicate how they are prepared.
6. The student will describe dry heat and moist heat methods of preparing meat.

7. The student will give evidence of an understanding of the following concepts:

price is related to demand
tenderness is related to location and kind of muscle
shrinkage is a function of high heat and overcooking.

Lessons:

1. Distribute "Protein and Meat Worksheet". Discuss the nature of proteins, sources, functions, and deficiency symptoms.

2. Discuss principles of protein cookery.

   a. Review egg cookery – protein cooks at low temperatures; toughens as a result of high temperatures.

   b. Meat protein
      High heat – toughens
      – contributes to high shrinkage
      – contributes to more undesirable drippings

      Low heat – results in more edible portion
      – yields moderate amounts of desirable drippings

3. Students research and discuss the role of protein nutrition to human development, mental activity, and the effects of poor nutrition on the total society.

4. Using the Protein and Meat Lab Sheet introduce meat cookery by discussing the composition of meat.

5. Distribute Beef Chart diagrams. Write the words: "chuck, flank, brisket, rump, rib, round, shank, plate, sirloin, short loin" on the chalkboard. Have students fill in sections they know in pencil. Discuss and correct the charts. Be sure each student has cuts correctly labeled for study.

6. Use meat pictures such as cards showing cuts of meats. Use as flash cards for students to recognize cuts. Repeat this exercise for a few days until students begin to name the cuts of meat by sight.

7. Plan for/ arrange a visit to the meat department of the local supermarket. Have students study and price the various cuts. Use beef price charts, pork, lamb.

8. Discuss meat pricing – as it relates to demand, edible portion, availability.

9. Describe and chart the dry heat and moist heat methods of cooking meat.

Additional Activities:

10. Students follow and chart meat prices overtime to identify "seasons", specials, and other fluctuations.

11. Have the meat manager discuss his job with the students, show students how meat is prepared for sale, give students additional "tips" on meat selection.

12. Students explore careers in meat packing, meat sales, meat preparation industry.

13. Students research references and prepare liver and other organ meats in flavorful and attractive ways.

STUDENT LAB SHEET

Protein and Meat **Name** _____

I. Protein Chart

Amino Acids	Sources	Functions	Deficiencies
(Essential amino acids are not manufactured (synthesized) by the body.)	Complete proteins contain all of the essential amino acids: meat, fish, poultry, eggs, milk, soybeans.	Growth and development Maintenance of body tissue.	Poor muscle tone. Premature old age. Loss of mental abilities.
(Non-essential amino acids are synthesized by the body.)	Incomplete protein foods contain some but not all of the amino acids: legumes, peas, beans, nuts.		

II. What is the result of low levels of protein in terms of mental growth?

(Studies have shown a relationship between low levels of protein and the ability to function, mentally. When protein levels were restored, performance improved. Over time, deficiencies were irreversible).

Of what concern is this information to us as members of a larger society?

(Society must care for individuals who cannot perform their function to make a contribution to society.)

III. Composition of Meat:

Fat The "Finish". Contrary to opinion fat in meat is desirable.

a. It is **marbled** or dispersed throughout the muscle of the meat, contributing to juiciness and tenderness. Fat contributes to satiety value, or ability of meat to satisfy the appetite.

b. It serves as an insulator for aging meats when it surrounds the meat; retains moisture, and acts as protection from contamination.

Lean:

a. The muscle portion of meat. The **edible portion.**

b. Supporting muscles are more tender; Locomotive muscles are less tender; Involuntary muscles – organs, e.g. heart, liver, stomach.

Bone:

a. When buying meat consider the following recommendation:
   - for meat containing no bone, allow 1/4 to 1/3 pound meat per serving.
   - for meat containing bone, allow 1/2 to 3/4 pound meat per serving.

b. Bone shape is an indicator of tenderness.
   - Round bones – indicate leg
   - T-bones, ribs, indicate more tender cuts.

Connective Tissue:

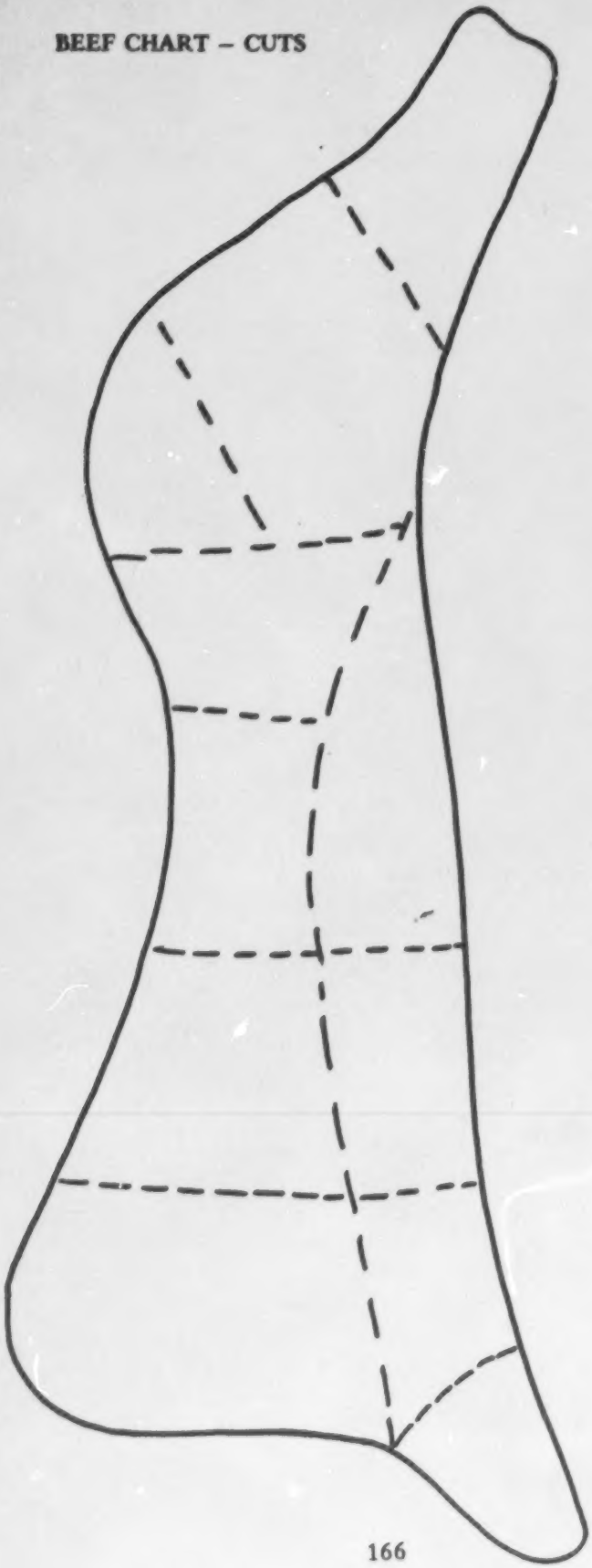
a. Fibrous portion, responsible for determining tenderness:
   - more connective tissue results in less tender cuts.
   - age, activity, and portion of the animal determine the amount of connective tissue.

b. Cooking with water has a tenderizing effect on connective tissue.

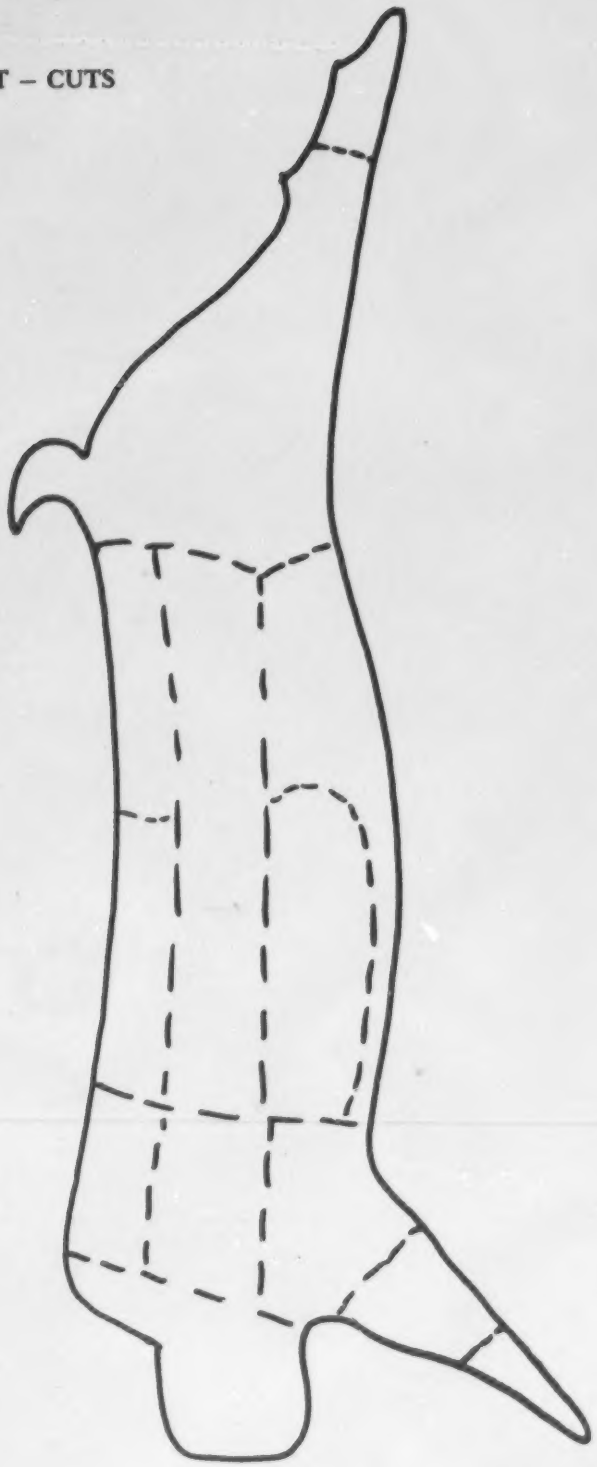
IV. Methods of cooking meats:

Tender Cuts		Less Tender Cuts	
Method	Description	Method	Description
Broiling	Over or under direct heat Thickness of meat and distance from heat source related to time and degree of doneness. Leave oven door ajar.	Braising	Brown meat Add water Cover Cook slowly for longer period of time
Roasting	Place meat on a rack. Roast in oven. Do not cover. Do not use water.	Stewing	Same as braising. Usually applies to meat that is cubed.

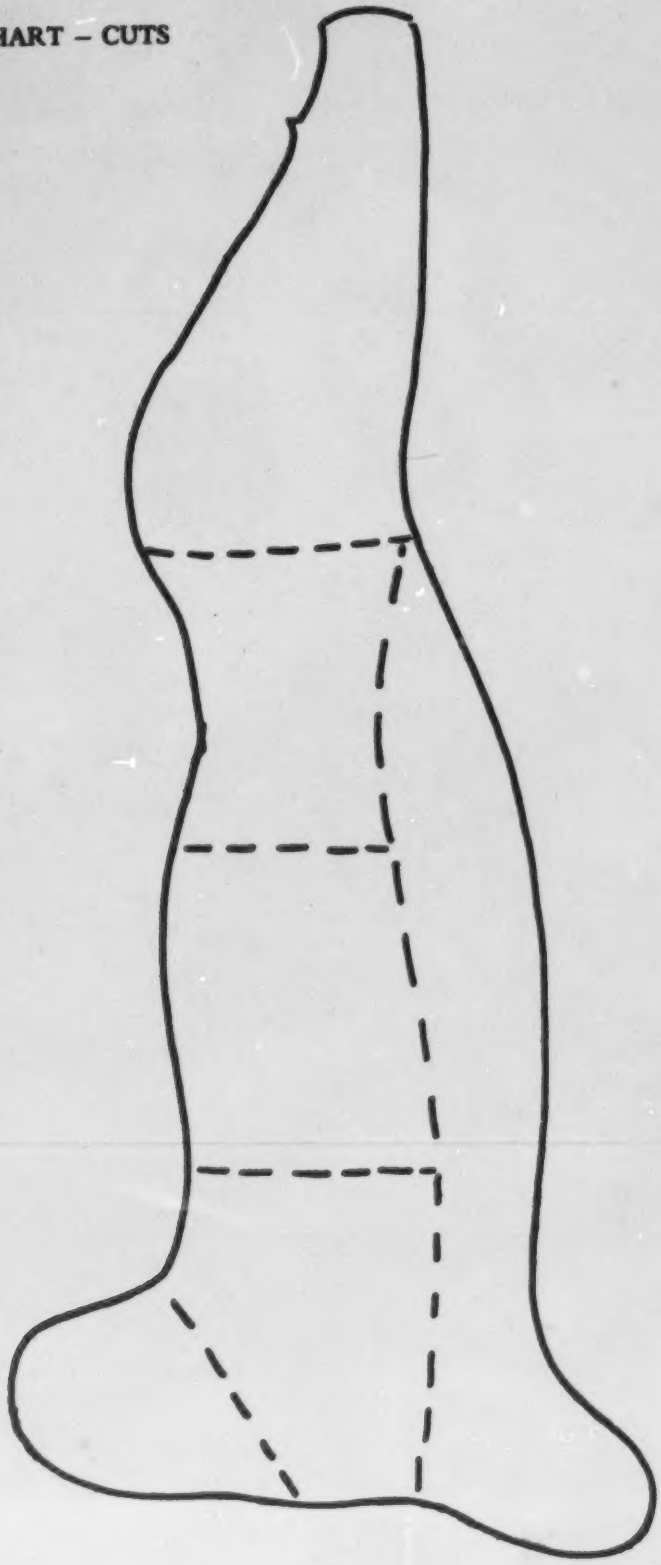
BEEF CHART – CUTS



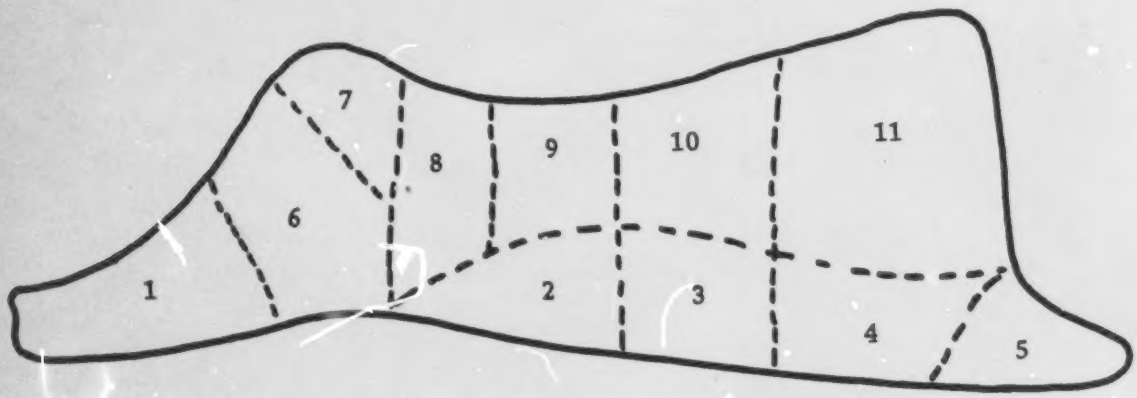
PORK CHART – CUTS



LAMB CHART – CUTS



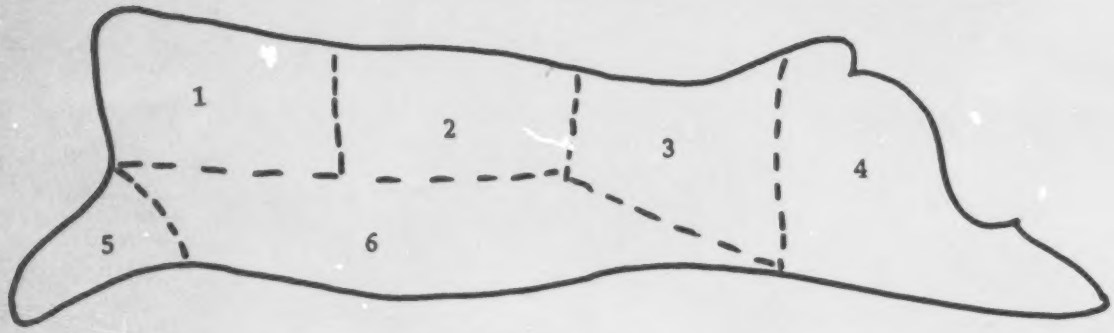
BEEF PRICE CHART



Cut	Uses	Cost	Comments
1. Hind Shank	Stew, soup		
2. Flank			
Rolled Flank	Stuffed, braised		
Flank Steak			
3. Plate			
Short Ribs	Braised		
Rolled Plate			
4. Brisket	Braised		
Corned Beef	Braised with vegetables		
5. Fore Shank	Stew, soup		
6. Round			
Round Steak	Cubed, pan broiled		
	Braised		
Top Round			
Bottom Round	Pot Roast		
Heel of Round			
7. Rump			
Rolled Rump	Pot Roast		
Standing Rump			
8. Sirloin Steaks	Broil		
Sirloin Tip Roast	Roast		
Cut in strips	Beef Stroganoff		

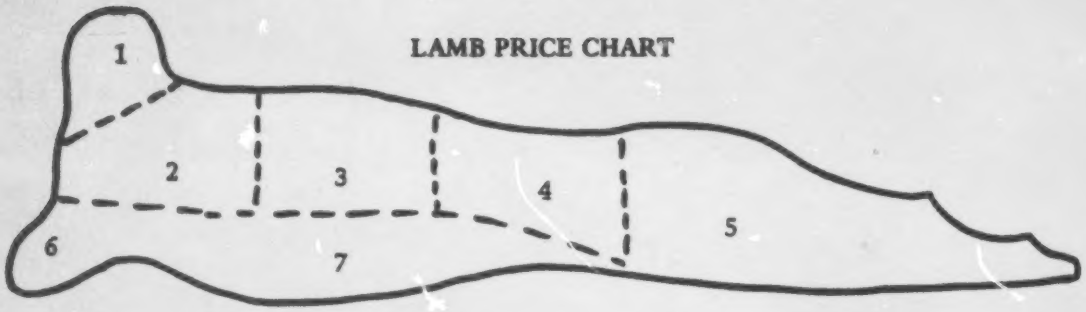
Cut	Uses	Cost	Comments
9. Short Loin			
Porterhouse Steak			
T-Bone Steak	Broil		
Club Steak			
10. Rib – Standing			
– Rolled	Roast		
Rib Steak	Broil		
11. Chuck			
Blade Steak	Broil, Braise		
Blade Pot Roast			
Triangle Pot Roast			
Boneless Pot Roast			
English Cut			
Arm Pot Roast			
Rolled Neck			
Boneless Neck	Stew		
12. Miscellaneous			
Tenderloin, Fillet Mignon	Broil Roast		
Chipped Beef	Served creamed over toast or vegetables		
Frankfurters			
Variety Meats			
Liver			

VEAL PRICE CHART



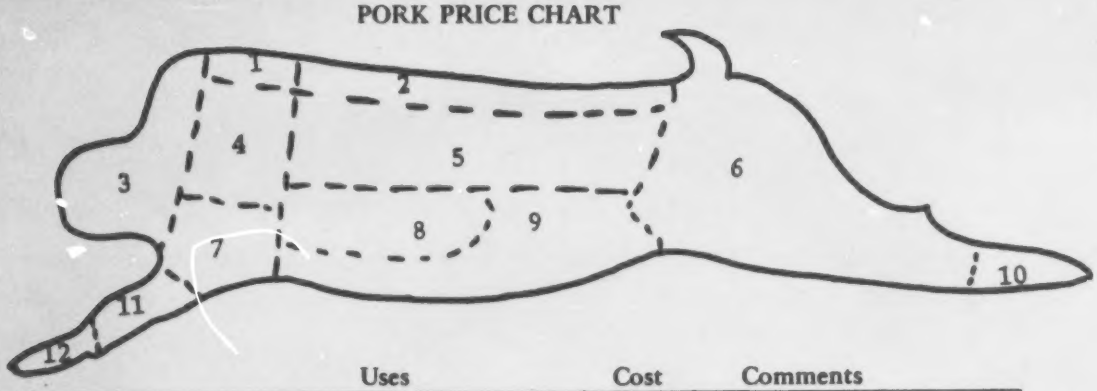
Cut	Uses	Cost	Comments
1. Shoulder			
Blade Roast	Roast, braise		
Blade Steak	Braise, pan-fry		
Arm Roast	Roast, braise		
Arm Steak	Braise, pan-fry		
2. Rib			
Rib Roast	Roast		
Crown Roast	Roast		
Rib Chop	Braise, pan-fry		
3. Loin			
Sirloin Roast	Roast, braise		
Sirloin Steak	Braise, pan-fry		
Loin Roast	Roast, braise		
Loin Chop	Braise, pan-fry		
4. Leg			
Shank Half	Roast, braise		
Heel of Round	Braise		
Standing Rump	Roast, braise		
Rolled Rump	Roast, braise		
Round Steak(cutlet)	Braise, pan-fry		
5. Shank	Braise, cook in liquid		
6. Breast			
Stew Meat	Cook in liquid		
Riblets	Braise		
Ground Veal Loaf	Bake, pan-broil		

LAMB PRICE CHART



Cut	Uses	Cost	Comments
1. Neck			
Neck Slices	Braise		
2. Shoulder			
Square Cut Shoulder	Roast		
Arm Chop	Broil, pan-broil,		
Blade Chop	braise		
Cushion Shoulder	Roast		
Saratoga Chops	Broil, pan-broil, braise, pan-fry		
3. Rack			
Rib Roast	Roast		
Crown Roast	Roast		
Rib Chops	Broil, pan-broil, pan-fry		
4. Loin			
Loin Chops	Broil, pan-broil		
English Chops	pan-fry		
Loin Roast	Roast		
5. Leg			
American Leg	Roast		
Frenched Leg	Roast		
Sirloin Chops	Broil, pan-broil, pan-fry		
6. Shank	Stew		
7. Breast			
Patties	Broil, pan-fry,		
Riblets	Stew		
Stew Meat	Stew		
Rolled Breast	Braise, roast		
Breast			

PORK PRICE CHART



	Uses	Cost	Comments
1.–2. Fat Back	Lard		
3. Jowl	Braise, broil		
Bacon Square	pan-fry		
4. Boston Butt	Braise, roast		
Blade Steak	Braise, pan-fry		
Smoked Butt	Roast		
5. Loin			
Tenderloin	Roast, braise, pan-fry		
Canadian-style bacon	Roast, broil, pan-fry pan-broil		
Loin Chop	Braise, pan-fry		
Rib Chop	Braise, pan-fry		
Loin Roast	Roast		
Crown Roast			
6. Ham			
Butt Half	Roast, cook in liquid		
Shank Half			
Slice	Broil, pan-broil		
Fresh Ham	Roast		
7. Picnic			
Fresh or smoked picnic shoulder	Roast, cook in liquid		
Arm Steak	Braise, pan-fry		
Arm Roast	Roast		
8. Spareribs	Roast, braise		
9. Side – Bacon	Broil, pan fry		
11. Hock	Braise		
10,12. Feet	Braise		

Topic B – Broiling

Objectives: The student will compare the effects of broiling on three cuts of meat– round, rib or sirloin, chuck.

Lessons:

1. Review cuts of meat, tender and less tender.
   Shade less tender cuts of meat.
   Predict what effects broiling will have.

2. Demonstration
   Broil three steaks: one chuck, one from rib section, one from round. Place them on the same rack and turn together. Do not season. Students sample each.

3. Comparative tasting and pricing.
   Use Mini Lab Worksheet. Students fill in.
   Generalization: Chuck, rib, round – vary in texture and flavor.
   Rib and chuck respond best to broiling.
   Compare cost per lb. as well as cost per serving.

4. Broiler safety and principles.
   Definition – Broiling
   Broil with door open
   Do not use foil directly under meat or pools of fat will accumulate causing fire.

   If a fire should occur:
   a. Turn off heat source and close door.
   b. Use baking soda.
   c. Know when to call Fire Department.

5. Study prices and labels on meat:
   a. Laws regarding generic name vs. butcher name.
      Example, London Broil must state chuck, round, or flank.
   b. Weight is indicated in decimals, for example:
      1.24 lbs. = 1¼ lbs.
      1.88 lbs. = between 1¾ and 2 lbs.
      1.48 lbs. = about 1½ lbs.

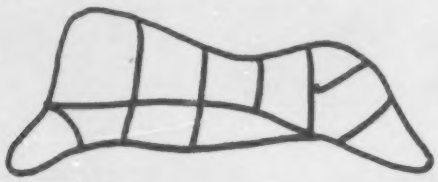
Additional Activities:

6. Study the effects of meat tenderizer on broiled meats.

MEAT MINI-LAB

Name _____

Objectives: To determine the effect of broiling on different cuts of meat.
To learn how to compute price per serving.
To develop a sense of discrimination when tasting meat.



1. Lightly shade the more tender cuts of beef.
2. Label: round; chuck; sirloin; ribs.

Directions: Broil one steak each of round, chuck, and sirloin or rib in same broiler 4-6 inches from the heat. Turn once.

Sample each.

Evaluation:

	Round	Chuck	Sirloin or Rib
Price per lb.			
Approximate price per serving			
Flavor			
Tenderness			

Summarize your conclusions:

Additional experiment: Put meat tenderizer according to the directions on half of each of the above cuts, leave half plain.

Compare the results and summarize.

Topic C – Gravy

Objectives: The student will prepare gravy using the pan method and kettle method.

The student will apply the proper method according to given situations.

The student will explain the concepts which determine the preparation of smooth gravy of desired consistencies.

Lessons:

1. Simulated Gravy Lesson.

    a. Using fat or margarine, the student will prepare pan gravy by:
    melting the fat or margarine (2 T.)
    stirring 2 T. flour into the fat
    adding water gradually
    stirring until mixture boils
    cook one minute.
    Check each product for smooth consistency.

    b. Using a heated fat (2 T.) and water 3/4 c.) mixture, the student will prepare kettle gravy by:
    shaking or mixing 2 T. flour with 1/4 c. cold water
    adding cold flour mixture gradually to the hot fat-water mixture
    bringing to a boil and cooking one minute.

2. Discuss concepts:

    a. Flour performs the thickening function when it absorbs liquid and expands. This is facilitated by heating.

    b. When thickening liquids flour must be dispersed by some method to prevent lumping.

    c. When meat is roasted (dry heat) the drippings consist primarily of fat. The method of dispersing the flour is the same as is the preparation of white sauce.

    d. When meat is cooked with a cover or in water, the drippings consist of fat and liquid. In this case, the flour is mixed with a small amount of cold water, then introduced to the hot mixture.

    e. When the entire mixture reaches the boiling point, the gravy is at its thickest consistency. Should it be necessary to increase the thickness, use the kettle method.

    f. The gravy is cooked for one minute to eliminate the raw starch flavor of uncooked flour in the mixture.

Additional Activities:

3. Conduct a comparative study of commercial gravy products, such as:

   Gravymaster
   canned gravy
   gravy mix (dried)
   beef extract

   a. List ingredients.

   b. Calculate costs by yield.

   c. Prepare and sample.

Topic D – Roasting and Leftovers

Objectives: The student will apply the principles of protein and meat cookery to the selection and preparation of roasts.

The student will prepare pan gravy of good consistency and flavor.

The student will prepare and sample a variety of dishes using cooked meat and will exhibit a wholesome or positive attitude toward new foods.

Lessons:

1. Distribute the Lab Worksheet on Roasting; establish objectives; review requirements.

2. Students look for and identify sources of recipes using cooked meat. Select recipes for use in class. Plan for leftover lab to be done following roasting.

3. Review directions for Pan Gravy.

4. Purchase, calculate cooking time, and prepare roasts (beef, pork, lamb, ham).

5. Lab – prepare gravy and sample roasts. Save remaining roast for leftover dish.

6. Prepare special dishes using cooked meat. Sample session – all students sample each product.

   Lamb Curry
   Sweet and Sour Pork
   Chow Mein
   Beef Croquettes
   Beef in Barbecue Sauce

STUDENT LAB SHEET

Meat – Roasting and the Use of Leftovers **Name** _____

Objectives: (Teacher and students derive)

Related Information:

1. What are the directions for roasting meat?

   (Place meat on a rack in a pan, fat side up.)

   (Do not cover, do not add water. Do not sear or baste.)

   (Seasoning is optional.)

2. List the cuts of meat which are generally roasted:

   Beef **Veal** **Pork** **Ham** **Lamb**

   (Students check several references and charts)

3. Where may one obtain information concerning the length of cooking time when roasting? Give several specific sources.

   (Students list page #s of charts in resources.)

4. Complete the following chart using the sources you found in #3.

Cut of Meat	Weight	Min. per lb.	Total Time
Pork loin	3.57 lb.		
Beef ribs (rolled)	4.00 lb.		
Half ham (shank)	4.50 lb.		
Leg of lamb	5.33 lb.		

5. Plan an oven meal. Plan a menu around each recipe sampled in class.

   Oven Meal

6. Describe two methods of preparing gravy:

Pan gravy	Kettle gravy
Add flour to drippings	Shake cold water and flour to mix
Stir in liquid	Add to hot liquid and fat (drippings)
Bring to boil	Bring to boil
Cook one minute.	Cook one minute.

7. Vocabulary

Sear *(To cook at high temperature for short time. Formerly thought to seal in juices. Actually it adds to shrinkage.)*

Dredge *(To coat with flour.)*

Score *(To cut slashes in the outer surface. Ham is often scored).*

Marbling *(Flecks of fat distributed throughout the muscle of the meat. Adds to flavor, juiciness and indicates tenderness.)*

Baste *(To spoon liquids or drippings over meat as it cooks.*

Tenderloin *(Very tender strip of beef which runs along the back, called filet mignon when broiled).*

8. a. What temperature does a meat thermometer record? *(The internal temperature of the meat).*

b. What are some different types of meat thermometers available and how are they used? *(Metal thermometers connected to oven controls which either sound a warning or turn oven off.)*

(Glass thermometers which require a metal skewer to puncture a hole first.)

9. What is gelatin and what are some precautions and instructions for its use?

(A by-product of meat – from bones and cartilage.)

(Instructions involve care in dissolving and distributing it in mixtures.)

(Raw pineapple contains enzymes which prevent "jelling" and must be blanched before being added.)

10. What is a meat accompaniment? *(A food served with meat.)*

Name some meat accompaniments that are traditionally served with:

Pork *(sauerkraut, applesauce, baked beans, crabapples)*

Lamb *(Mint jelly)*

Ham *(pineapple, cloves, raisin sauce, crabapples, sweet potatoes)*

Roast beef *(Yorkshire pudding)*

11. List as many ideas for the use of leftover roasts as you can find. Organize your lists according to type of meat: beef, pork, lamb, ham, etc.

Type of meat	Suggestions of dishes	Recipe Source (Book and page no.)

Topic E – Braising

Objectives: The student will explain the principles which are applied in the braising of meat, identify cuts of meat commonly braised, and describe the procedures used when braising meat.

The student will explain the inspection and grading of meat.

The student will apply the principles of braising in the preparation of meat.

Lessons:

1. Distribute the Braising lab sheets. Establish objectives and plan procedures.

2. Students plan and prepare a braised meat dish. (This may take longer than one class session. In this case students may use two class days or begin products before school or prior to the class session.)

   Suggestions:
   - Pot Roast
   - Oven Pot Roast
   - Beef a la Mode
   - Sauerbraten
   - Swiss Steak

3. Students may research information for lab write-up independently, using references, while products are cooking.

STUDENT LAB SHEET

Braising (Cooking in Liquid) **Name** _____

Objectives: Cook less tender cuts of meat.
Become familiar with meat inspection and grading.

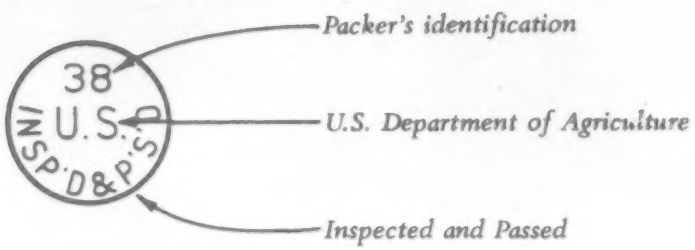
Menus: Plan a menu around the product you prepared in class.

Recipes: Carefully copy and attach the recipe(s) you used.

Related Information:

1. What is the nutritive value of meat?
   (Protein, Fat, Iron, Thiamine (pork), Niacin, Riboflavin, Calcium, Phosphorus, Riboflavin; Liver contains Vitamin A.)

2. Fill in the diagram of the packer's seal and tell what each of the symbols means.



   a. What agency is responsible for meat inspection? *(U.S. Department of Agriculture)*
   b. What does the seal tell you about the meat? *(The meat has been inspected and found to be: wholesome and fit for human consumption. Packed under sanitary conditions, free from harmful effects.)*

3. What determines grades in meat?
   a. *(Finish – the amount and quality of fat.)*
   b. *(Conformation – shape, fullness.)*
   c. *(Quality – Color of lean – characteristic for type of meat.)*

4. Chart the grades for the following kinds of meat: (Readily available in texts.)

Beef	Veal	Pork	Lamb	Mutton

How is the grade of meat indicated on the meat?

(Vegetable color – stamp on the outside – in shape of a shield).

5. Look at the label on a canned product containing meat. Are there any labels indicating the grading or inspection of the meat? Explain what you found. Include a label if possible.

(Students express findings)

6. a. What are the directions for pot roasting? *(Dredge meat with flour if desired. Brown on all sides in small amount of fat. Add water, cover, and cook slowly for long time.)*

   b. How is the gravy prepared? *(Combine 2 T. flour with 1/4 c. cold water for each cup of gravy desired. Stir into hot liquid. Bring to boil, boil one minute.)*

7. Name 3 cuts of beef usually pot roasted:

   (Chuck, Rump, Round, Brisket, Flank)

8. Vocabulary:

   Braise *(To cook meat in water (liquid) with cover, slowly, for a long period of time. Used for less tender meat. The liquid breaks down and softens connective tissue.)*

   Corned beef *(Brisket that has been soaked in a brine or salted solution).*

   Dredge *(To coat with flour).*

   Stew *(To cook in water, covered).*

   Finish *(Term that applies to the quality and quantity of fat in the animal).*

   Sauerbraten *(Braised beef which first has been marinated in a sweet- sour solution. German. Flavored with ginger.)*

Beef a la Mode *(Pot Roast with gravy)*

Ragout *(A type of stew)*

Goulash *(Stew)*

(Students compare these and derive definitions.)

Dutch oven *(A heavy deep pot used for braising.)*

Resources:

Interstate Printers and Publishers, Inc.
Meat Identification Kit, 1927 North Jackson St., Danville, Illinois

Shank, Fitch, Chapman. *Guide to Modern Meals*

Directions: Complete the chart using References available. Under Method, indicate the type of gravy (Pan or Kettle or none) that you would prepare.

Name _____

MEAT–MEAL PLANNING EVALUATION

Cut of Meat	Wt. of Pkg.	Method of Preparation	Total Cooking Time	Time-in	Time-out	Menu
Chuck Roast	3.45 lb.					
Pork Loin	4.25 lb.					
Beef, Rolled Rib	4.78 lb.					
Ham, Shank Half	3.95 lb.					
Beef Rump	2.50 lb.					
Round Steak	2.00 lb.					

QUIZ

Meat Cookery – Problem-Solving **Name** _____

Directions: You are to use the textbooks, cookbooks, and other references to solve the problem given below. Be sure to support your answers with facts which you have obtained and include these in your answers. Make a list of the references you use as you go and record them in the space provided.

Problem: You have a boneless *chuck roast which weighs close to three pounds.

Questions:

1. How many servings of meat will you have? *(8)* Upon what do you base your answer?

2. From what animal and from what part of that animal does the roast come?
   (Beef, shoulder)

3. By what method should the roast be prepared? *(Braise)*
   Describe the method briefly. *(Brown. Add water, cover – cook slowly.)*
   Why did you choose this method? *(Less tender cut needs water)*

4. Approximately how long will it take to prepare? *2½ hours*

References Used: Title **Pages**

_____

_____

_____

_____

_____

_____

*Teacher may vary cut.

Evaluation – Meat Cookery

1. Meat Cookery problem-solving evaluation. Vary the cut and weight for each student in order to individualize the evaluation experience.
2. Students complete the Meat-Meal Planning Chart.
3. Student performance.
4. Lab sheets – evaluation.
5. Use flash cards – for identification of meat cuts.

Resources:

Better Homes and Gardens Meat Cookbook, Meredith

Better Homes and Gardens Now Cookbook, Meredith

UNIT 21 – MINERALS – FISH COOKERY

Objectives: Upon completion of this unit the student will –

Discuss the role and function of specific minerals in human nutrition.

Explain what is meant by an inter-relationship between nutrients and cite examples.

Explain what is meant by the term "properties" as it applies to the conservation of nutritional quality during food preparation.

Apply the principles of protein cookery to the preparation of fish.

Conduct a comparative study of types of fresh fish.

Exhibit a positive attitude toward fish and fish dishes.

Lessons:

1. Distribute lab sheets – Minerals – Fish Cookery.
2. Broil or bake several types of fresh fish in order to acquaint students with fish varieties, flavor, prices. Suggestion: include haddock, sole, flounder, halibut, salmon. Students evaluate appearance, flavor, texture and cost.
3. Students prepare fish dishes of their own choosing. Sample and evaluate products.

Additional activities:

Study the laws governing the inspection and sale of fish. Discuss the FDA findings regarding the processing of fish. (See FDA Consumer.)

Research the problem of cured fish and the epidemic of botulism. Discuss findings.

	Unit of Purchase	Cost	Serving size	Comments
Fresh raw shrimp (size count)				
Fresh raw shrimp (size count)				
Fresh raw shrimp (size count)				
Frozen shrimp cleaned count				
Whole live lobster				
Frozen lobster				
Frozen lobster tails				
Canned lobster				
Crab – whole				
Crab meat – canned				
Crab meat – frozen				

STUDENT LAB SHEET

Minerals – Fish Cookery **Name** _____

Objectives: Discuss role of minerals in human nutrition.
Gain understanding of nutritional inter-relationships and properties.
Prepare fish according to protein cookery principles.
Conduct a comparative study.

Menus:

1. Plan a menu around one of the kinds of fish prepared and sampled in class.

2. Indicate several uses for leftover baked or broiled fish.

Recipes: Copy and attach to Lab.

Related Information:

1. Complete the following chart:

Mineral	Sources	Functions
Calcium	milk, cheese, ice cream dark green vegetables except spinach and beet greens. These contain oxalic acid which prevents calcium utilization	Build and maintain bones and teeth. Regulate nerve, muscle, heart activities. Control blood clotting Deficiency = retarded growth Rickets and slow blood clotting and porous bones.
Phosphorus	milk, cheese, eggs, fish whole grain cereals, dried beans and peas	Build and maintain bones and teeth. Assist cell activity and oxidation of foods in body cells.
Iron	liver, eggs, meat, dark green vegetables, fruits, whole grain and enriched cereals.	Used in building hemoglobin in red blood cells.
Iodine	salt water fish, iodized salt	Proper functioning of thyroid, prevents goiter.
Copper	widely distributed in foods	Assists in formation of hemoglobin. Aids in utilization of iron.

2. a. What is meant by an inter-relationship between nutrients? *(Two or more nutrients function together or utilize one another to perform specific functions.)*

   b. Give three or four examples of inter-relationships between and among nutrients.
   (Phosphorus and calcium work with Vitamin D to form bones and teeth.)
   (Phosphorus assists in the oxidation of foods in the cells.)
   (Copper aids the utilization of iron.)

3. a. Nutrients have properties which are important to consider in preparing foods so that maximum nutritive value is preserved. What is meant by the term "property"?
   (Property refers to characteristics of nutrients such as solubility in water, solubility in fats, resistance to heat).

   b. What properties of minerals are important in the preparation of foods containing them?
   (Some mineral salts are dissolved in cooking water and lost if the liquid is discarded. Minerals are found in the hulls and peels of fruits, grains, and vegetables, and are lost when these are removed.)

   c. Suggest several ways to prevent nutritive losses in food preparation.
   (Proper storage)
   (Minimal cutting + cooking = vitamin C)
   (Minimal water, use water containing water soluble vitamins)

   d. What are several suggestions for the use of vegetable water?
   (Soups, sauces and gravies)

4. What is the nutritive value of fish?
   (Protein, phosphorus, iodine in salt water varieties, B vitamins.)

5. Vocabulary: Students derive – discuss
   Bisque
   Bouillabaise
   Manhattan clam chowder
   New England clam chowder
   Scampi
   Paella
   Finnan Haddie

6. Terms, classifications and types of fish. Discuss, show examples.

	Examples
Fresh water fish	*(bass, perch)*
Salt water fish	*(sole, flounder)*
Cured fish	*(finnan haddie)*
Shell fish – mollusks	*(clams, oysters)*
Shell fish – crustaceans	*(shrimp, lobster)*
Canned fish	*(tuna, salmon)*
Lean fish	*(flounder, haddock)*
Fat fish	*(bluefish, mackerel)*

7. By what principles is fish prepared?

(Protein cookery)

(Fish is tender – needs little cooking generally)

8. Comparative shopping – fish

Type of Fish	Cost per lb.	No. of Servings	Cost per Servings	Comments – appearance flavor, texture

9. Suggest several accompaniments for fish.

UNIT 22 – VITAMINS

Objectives: Upon completion of this unit the student will -

Identify the role of nutrients in healthy physiological processes.

Apply principles of nutritional properties to food preparation.

Define and give examples of interdependencies among nutrients.

Discuss the arguments supportive of and in opposition to the use of vitamin supplements.

Lessons:

1. Distribute Vitamin Lab Sheet. Students research and discuss functions and sources of important vitamins.
2. Use references and discussion to complete lab sheet.
3. Students debate the use of vitamin supplements.
4. Students may present a symposium on vitamins, their functions, sources, and properties.

Evaluation:

Participation
Quizzes

STUDENT LAB SHEET

Vitamins Name _____

1. Chart the vitamins indicating functions, deficiency symptoms and sources of each.

Vitamin	Functions	Deficiency Symptoms	Sources
Water Soluble			
B_1-Thiamine	Promotes appetite and digestion. Normal functioning of nervous system. Metabolism of sugar	Beri-Beri	Enriched and whole grain products. Pork Milk
Riboflavin	Normal functioning of nervous system. Clean vision Health of skin	Cracking at corners of mouth.	Organ meats Enriched and whole grain products. Cheese, eggs, kale.
Niacin	Sugar metabolism. Normal gastro-intestinal functioning. Health of skin	Pellagra	Meat Enriched and whole grain products. Chicken Organ meats
Vitamin C (Ascorbic Acid)	Sound teeth, gums, bones.	Scurvy Bleeding gums Bruising	Citrus fruits Tomatoes Raw cabbage Cantaloupe Green peppers Fresh pineapple
Fat Soluble			
Vitamin A	Maintains resistance to infection. Health of eyes and skin. Increases Longevity	Night blindness	Green and yellow vegetables. Margarine (added) Milk (added) Liver
Vitamin D	Sound teeth and bones Regulates use of calcium and phosphorus	Rickets	Liver Butter Cod liver oil Milk (added) Sunlight
Vitamin K	Normal clotting of blood.		Cabbage Carrots Cauliflower Cereals Liver
Vitamin E	Proper functioning of reproductive system.		Whole grain foods Egg yolk Wheat germ

2. a. What is meant by the term fat soluble as it applies to vitamins?
(Vitamins dissolve in fat)

b. Name four fat soluble vitamins. *(A D K E)*

c. Why is this information useful to the person who is preparing food? To the person concerned about his vitamin intake?

3. a. What is meant by the term water soluble as it applies to vitamins?
(dissolve in water)

b. Name four vitamins that are water soluble. *(B_1, C, Niacin, Riboflavin)*

c. Why is it important for a person who is preparing food to understand the concept that some nutrients dissolve in water?

4. a. Label the nutritive value of the parts of the cereal grain.

b. Some nutrients assist other nutrients in performing their functions. This is referred to as an interaction, interdependency, or interrelationship between nutrients. Give an example of an interrelationship between nutrients which you found while charting minerals and vitamins.
(B vitamins are needed in the utilization of carbohydrates.)
Discuss the cereal grain as an example of nutritional interdependencies found in natural foods.

5. a. Which nutrients are stored in the body? *(A, D)*

b. Which nutrients are not stored and must be included in the diet daily?
(Vitamin C)

6. Some people prescribe for themselves vitamin pills and supplements. After considering the evidence, discuss your point of view concerning this practice.

a. What are some reasons for taking supplements.

b. What are some reasons why the practice may be either useless or unwise.

Your opinion:

7. Name nutrients which perform functions related to health in each of the following specific areas:

Eyesight	*(Vitamin A, etc.)*
Complexion, skin	*(Vitamin A, D, etc.)*
Muscle tone	*(Protein, calcium, etc.)*
Mental health and attitude	*(Vitamin B, etc.)*
Teeth, gums	*(Vitamin D, C, calcium, phosphorus)*
Appetite and digestion	*(Vitamin B_1 etc.)*
Mental performance	*(Protein, etc.)*
Nerves	*(Vitamin B_1, etc.)*

Evaluation:

Comment on your own nutritional health before and since this study began.

UNIT 23 – VEGETABLES

Objectives: Upon completion of this unit the student will –

Demonstrate the ability to research information concerning vegetable cookery from a variety of references.

Conduct a comparative study of the costs of vegetables.

Observe the effects of a variety of methods of cooking vegetables and determine which method results in the most attractive, flavorful, and nutritionally adequate product.

Give evidence of positive and wholesome attitudes toward vegetables as a food.

Explain the contribution that vegetables make in one's diet.

Locate geographical locations of food processors in New Jersey.

Identify vegetables according to their structure on the plant and their flavors.

Lessons:

1. Distribute student lab sheets "Vegetables". Establish objectives and overall procedures.

2. Have students arrive at definitions by discussion or through research – relate definitions to the study of vegetables and vegetable cookery.

3. Visit the supermarket to compare prices of fresh, frozen, and canned vegetable products. Prepare these in class if time permits.

4. Students study the classifications of vegetables according to their origin on the plant. Classify as strong or mild flavor through experience and discussion.

5. Using maps of New Jersey, locate counties and major cities or areas of interest. Look on processed vegetable labels to determine the location of processors and distributors in New Jersey. Locate these on the map.

6. Using references and food charts, study nutritive values of vegetables. Relate nutritive value of vegetables to minimum daily requirements.

7. Study and discuss the effect of preparation methods on nutrition:

    a. Water soluble nutrients – B-complex vitamins, calcium, iron, phosphorus, and vitamin C.

These are dissolved in cooking water; therefore, use little water in their preparation and use the water in other ways. For example, potato water is excellent for use in preparing gravy.

b. Fat soluble nutrients – Vitamins A, D, K and E.

These are absorbed in fat. They generally are not lost in the cooking water. Frying vegetables results in a loss of these vitamins.

c. Instability of vitamin C.

Vitamin C is lost by heat and exposure to air; by extended storage of vegetables and by excessive cutting or chopping during the preparation of foods containing it.

d. Effect of baking soda on nutritive value.

Baking soda added to vegetables during cooking increases the brightness of their color; however, these vegetables lose nutritive value due to this process.

8. Have students perform the experimental cookery section of the lab (#8, Part I) using fresh green beans, carefully controlling conditions. Compare results by labeling and displaying each product and examine for appearance, texture, and flavor. Students draw conclusions based upon nutrition study and experiment.

9. Students prepare a variety of vegetable dishes as listed in (#8, Part II). Have all products completed at the same time, so that students will judge and plan time accordingly. Conduct a sampling session. Each student should sample each variety. Students may select their own vegetable dishes to prepare, as well.

Additional Activities:

Students prepare and sample a variety of dishes using one kind of vegetable as potatoes (#8, Part III), broccoli, carrots, green beans, etc.

Resources:

Cote, *People, Food, and Science*

STUDENT LAB SHEET

Vegetables **Name** _____

Objectives: To improve habits of independent study and research.
Work on cost comparisons.
Determine proper methods of vegetable cookery.
Improve personal attitudes toward vegetables.
Review nutritive values of vegetables.

Menu Planning:

Plan menus using several of the items sampled in class. (Minimum 3 menus)

Recipes: Collect recipes using vegetables which would appeal to you. Include several used in class. Harvard beets; Swiss green beans, creamed onions, lyonnaise potatoes; etc.

1. Definitions:
   a. Legume – *(Plant bearing root nodules which take nitrogen from the soil. Nitrogen is used in formation of amino acids. Beans, peas, and nuts are legumes and therefore, sources of protein.*
   b. Tuber -- *(Thickening on root – rhyzome – potato)*
   c. Lyonnaise – *(Cooked with onions – potatoes Lyonnaise)*
   d. Hollandaise – *(Sauce of lemon, eggs, butter – served on vegetables, especially broccoli.)*
   e. Cellulose – *(Fibrous part of vegetables – undigestable carbohydrate.)*
   f. Parboil – *(To partially cook by boiling – vegetables may be parboiled, then baked or cooked by some other process.)*
   g. Garnish – *(Decorative touch on a dish.)*
   h. Convenience food – *(Packaged food product, partially or completely prepared.)*

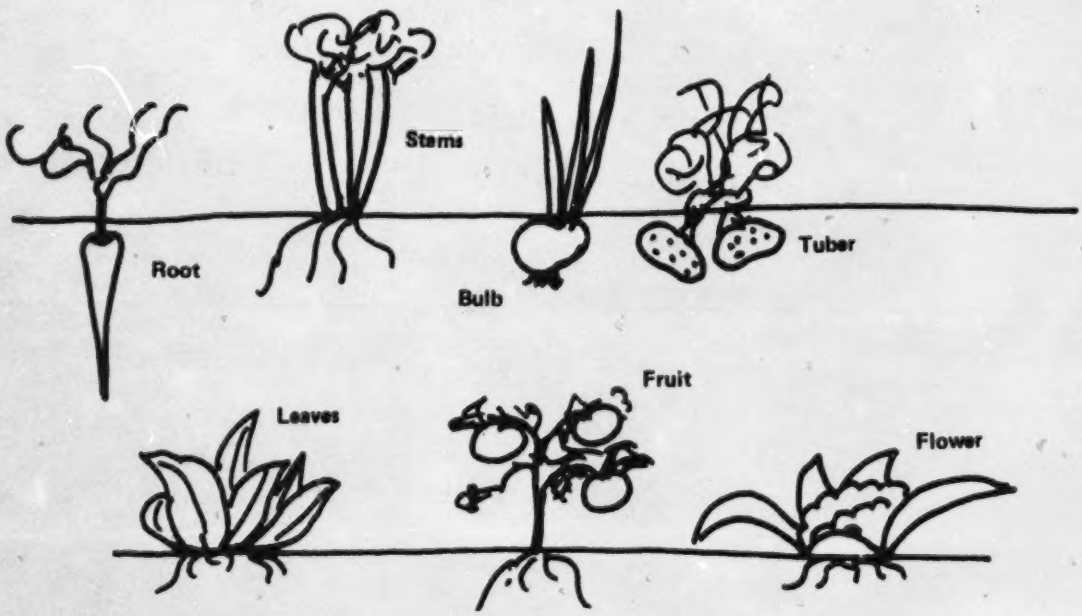
2. Chart the comparison of two of the following vegetables:

Vegetable		Cost of Pkg.	Wt. of Pkg.	Cost/lb.	Comment
Green Beans –	fresh				
	frozen				
	canned				
Carrots	fresh				
	frozen				
	canned				
Beets	fresh				
	frozen				
	canned				
Peas	fresh				
	frozen				
	canned				

Conclusions:

3. How should canned vegetables be prepared for best results?
(Heat liquid to 1/2 amount of concentration. Add vegetables, heat gently.)

4. The diagrams below illustrate the parts of a plant. Vegetables are classified according to their location, that is, whether they are bulbs, roots, tubers, stems, leaves, flowers, and fruits. Study several references and then label the diagrams.



5. Chart the classifications of vegetables according to flavor. (You will need to use several references. Discuss)

	Strong Flavored	Mild Flavored
Bulbs		
Fruits		
Flowers		
Roots		
Leaves		
Tubers		
Stems		
Seeds		

6. Nutritive values of vegetables. Refer to a food chart and texts to answer the following questions:

a. Name three vegetables high in vitamin C.

_____ _____ _____

How much vitamin C is required daily by teenage girls?_____ boys? _____

b. What vegetables contribute vitamin A in significant amounts?

Vegetable	Size of Portion	I.U. Vitamin A
_____	_____	_____
_____	_____	_____

How many International Units are required daily by teenagers? _____

c. What other nutrients are found in vegetables in significant amounts? Give examples:

Vegetable	Nutrient and Amount
_____	_____
_____	_____
_____	_____
_____	_____

d. Are any vegetables listed as fair-to-good sources of protein?

Vegetable	Grams of Protein
_____	_____
_____	_____
_____	_____

e. What nutrients would be found dissolved in cooking water of vegetables?

_____

f. What is the effect of adding baking soda to cooking water of vegetables, nutritionally? _____

_____

7. Experimental Cookery – Comparative Cooking – Green Beans

Objectives: By the conclusion of these experiments the student should be able to –

Distinguish the difference between properly and improperly cooked vegetables.

Cook vegetables so that they are attractive, palatable, and nutritious.

Complete the chart:

Method	Appearance	Texture	Flavor
a. no cover, much water fast, 30 min.			
b. no cover, little water medium, 30 min.			
c. covered, much water fast, 30 min.			
d. covered, little water medium, 30 min.			
e. covered, little water medium, 30 min. baking soda added			
f. frozen, according to directions			
g. canned, according to recommended procedures			

Conclusions:

8. **EXPERIMENTAL COOKERY – A Variety of Vegetable Dishes**

Objectives: By the conclusion of Parts II and III you should be able to–

Tolerate and even like more vegetable dishes than before.

Create interesting and nutritious menus using vegetables.

Explain the principles of cooking vegetables.

Indicate the results of the sampling session:

	Appearance	Flavor	Texture	Evaluation
Harvard beets				
Creamed canned onions				
Creamed fresh onions				
Scalloped potatoes				
Swiss green beans				
Lyonnaise potatoes				
Broccoli with hollandaise				
Spinach soufflé				
Artichokes				

UNIT 24 – NUTRITION SUMMARY – SALADS

Objectives: Upon completion of this unit the student will –

Apply the principles of nutrition in analyzing diets.
Suggest ways to lose weight while maintaining an adequate nutritional balance.
Discuss the role of nutrition in the lives of various groups of people.
Prepare appetizing and nutritious salads.
Identify a variety of salad ingredients.

Lessons:

1. Distribute salad lab sheets. Establish objectives and plan procedures.

2. Students collect and analyze fad diets and diets from magazines.

3. Establish caloric requirements and formula for weight reduction by lowering caloric intake:

   1 pound excess weight = 3300 calories
   Total calories used (ex. 2400) per day, -400 per day over 9–10 days should result in the loss of 1 pound.
   Students write up one week's 1700 calorie diet. Evaluate. Discuss the need for physician's advice in dieting.

4. Divide the class into small groups. Have each group discuss and report to the class the need for adequate nutrition by:
   a. teen-age boys
   b. teen-age girls
   c. pregnant women
   d. mothers of young children
   e. fathers of young children

5. Demonstrate the preparation of salads and vegetables and fruits for salads. Emphasize interesting but natural shapes and techniques as bias cuts, scoring cucumbers with a fork before slicing, carrot curls, radish roses.

6. Students complete salad worksheets.

7. Prepare and sample a variety of salads and dressings.

8. Have students visit the local supermarket and make a list of as many items in the produce department as they can find which can be used in salads.

Evaluation: Analysis of Diets
Preparation of Salads
Quizzes
Worksheets

Resource: Kilander, *Nutrition for Health* New York: McGraw Hill, 1951.

STUDENT LAB SHEET

Salads Name _____

Objectives: Prepare a variety of dressings.

Prepare attractive, nutritious salads.

Menus: Plan a menu using each of the following:

An appetizer salad	A side dish salad	A main dish salad

Give examples of each of the following:

Vegetable salads –

Fruit salads –

Protein salads –

Gelatin salads –

Related Information:

1. What are several principles of preparation which should be followed in order to produce artistic, flavorful, nutritious salads.

2. Describe the following salad dressings: (Read recipes, discuss)

   a. French
   b. Italian
   c. Mayonnaise
   d. Cooked salad dressing
   e. Thousand Island dressing
   f. Russian dressing

3. Vocabulary (Students derive)

   a. Aspic
   b. Caesar's salad
   c. Chef's salad
   d. Mousse
   e. Perfection salad
   f. Waldorf salad

4. Molded salads:

   a. What is the difference between "Jello" and gelatin? *(Jello is a brand name – gelatin generic name)*

   b. At what point should fruit and/or vegetables be added to gelatin? Why? *(When partially solidified – some float, some sink)*

   c. What is the effect of raw pineapple on gelatin? *(Enzymes break down gelatin – will not solidify)*

   d. What is a timesaving technique in preparing commercial flavored gelatin? *(Use ice instead of water)*

   e. How are gelatin salads unmolded? *(Dip in hot water)*

UNIT 25 – INTRODUCTION TO FOOD SERVICE

Appetizers and Beverages

Objectives: Upon completion of this unit the student will –

Prepare and serve appetizers and beverages attractively.

Explain several types of food service and plan menus suitable for each.

Set tables and serve food according to acceptable and recommended standards of etiquette.

Demonstrate an understanding of the roles of waitresses, receptionists, waiters and busboys in food service establishments.

Topics:

A. Food Service
B. Appetizers
C. Beverages

Topic A – Food Service

Objectives: The student will set table covers for a variety of menus.

The student will describe several forms of food service and plan menus for each.

Lessons:

1. Distribute worksheets for Food Service.

2. Discuss a variety of kinds of food service establishments:

   Fast Foods – Goody's, MacDonald's, Burger King
   Formal Restaurants – Four Seasons, Cattleman
   Family Restaurant – Howard Johnson's
   Ship Restaurants – cruises
   Foreign Foods & Specialties:

      Seafood
      Steak house
      Italian, French

   Cafeterias – Horn & Hardardt

   Study and discuss menus from each, prices, service, advertisements.

STUDENT LAB SHEET

Food Service _____ **Name** _____

1. Describe each type of table service, plan a menu for each, and illustrate the placement of the china, glassware, and silver.

Type of Service Characteristics	Menu	Cover or Placement
Formal or Russian Service		
Family Service		
Buffet		

2. Interview and observe a waiter or waitress to determine the following:

   a. What personal qualities needed for the job:

   _____ _____

   _____ _____

   _____ _____

   b. What are some basic responsibilities, duties, or procedures which are followed in the course of serving customers?

   _____ _____

   _____ _____

   _____ _____

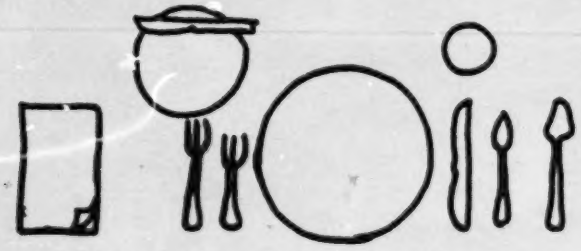
   _____ _____

   _____ _____

   c. Salaries or wages and tips make up waiters' and waitresses' incomes. What are some arguments in support of this system? What are some arguments against it?

Pro's	Con's
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. Demonstrate and practice the placement of china, glassware and silver using rules for placement. Use a variety of menus.



   a. Napkins to left, fold to left.
   b. Silver: forks at left, spoons at right in order of use beginning at the outside. Knife blade facing plate, just to the right of the plate.
   c. Glass at tip of knife.
   d. Bread and butter plate at tip of forks.
   e. Salad to left.
   f. Coffee to right.

4. Discuss rules of table service.

   a. Place and remove at the left.
   b. Beverages are served and removed at the right.
   c. Begin with host or guest of honor.
   d. Serve quietly.
   e. Remove all accompaniments from main courses before serving dessert.

5. Role-play table service in a variety of situations.

6. Students plan and draw covers for types of service or worksheet.

7. Discuss and analyze the job of waiter or waitress in a restaurant. Debate or discuss tipping policies.

Additional Activities:

8. Consider, discuss, research and create ideas for table centerpieces. Establish criteria for effective centerpieces.

9. Invite faculty, parents, or other guests for sit-down dinner or luncheon at which students serve food.

Evaluation:

Student participation, performance
Table-setting practice
Quiz

Resources:

Dietz, Susan. *The Correct Waitress,* Ahrens, 1952.

Lefler, Sack, and Blane. *The Waiter and his Public,* Ahrens.

Topic B – Appetizers

Objectives: The student will describe the characteristics of "good" appetizers.

The student will categorize a variety of appetizers for the purpose of expanding the number of options or choices.

The student will prepare and sample a variety of appetizers that meet high standards of quality and flavor.

The student will create appetizers; compare several recipes for seafood cocktail and create original recipes.

Lessons

1. Discuss and establish criteria for good appetizers.

2. Students browse through cookbooks to survey appetizer possibilities for future reference.

3. Students select, plan for, prepare, and sample a variety of appetizers. Experiment with interesting combinations:

   Orange sherbet in cranberry juice
   Flounder with seafood cocktail sauce
   Cheese balls
   Cheese puffs
   Fruit cup with fresh mint garnish
   Fruit cup with lemon juice
   Crab meat dip
   Vegetable dip

4. Analyze, compare and chart the comparisons for a number of recipes for seafood cocktail sauce. Students create, prepare, and sample several.

Evaluations:

Student participation, product and workmanship.
Lab sheets with statement of self-evaluation.

STUDENT LAB SHEET

Appetizers **Name** _____

Objectives: Establish characteristics of appetizers
Prepare a variety of appetizers that meet the established standards.
Begin a list of a wide assortment of appetizers for future reference.

1. What are the characteristics of "good" appetizers?

   (small portions
   attractive, colorful
   stimulate appetite
   not sweet, not filling
   flavorful, tangy, tart
   complementary to the menu that follows)

2. Chart, categorize, or list a wide assortment of appetizers according to their types: Hot, cold, meat, fish, salad, juice, cheese, miscellaneous.

Classification and Listing of Appetizers:

(Students browse and list, share and discuss lists.)

Beverages:

_____
_____
_____
_____
_____
_____
_____

Dips:

_____
_____
_____
_____
_____
_____
_____

Hot Appetizers **Cold Appetizers**

Meats:

_____
_____
_____
_____
_____

_____
_____
_____
_____
_____

Hot Appetizers	Cold Appetizers
Fish:	
Cheese:	
Fruit:	
Vegetable:	
Miscellaneous:	

Seafood Cocktail Sauce – A comparison

Look up several recipes for cocktail sauce. Notice the different combinations of ingredients. Chart four of them below.

Ingredient	Recipe 1	Recipe 2	Recipe 3	Recipe 4
Catsup				
Chili sauce				
Horseradish				
Lemon Juice				
Tabasco				
Salt				
Pepper				

Now create your own combination!

Note: Seafood other than shrimp may be used as an appetizer. Try cold steamed haddock or flounder.

Topic C – Beverages

Objectives: The student will prepare coffee, tea, and cocoa according to the principles and standards for acceptable products.

Lessons:

1. Distribute Lab Sheet for Beverages.
2. Show filmstrips –

   Tea Times or equivalent from National Tea Council (free)

   Coffee, Please from Pan American Coffee Bureau (free)

3. Demonstrate a variety of means of preparing coffee.
4. Students research principles of preparing cocoa and make cocoa in the lab.
5. Visit the supermarket to:

   List and compare brands of coffee
   Compare tea prices

6. Follow supermarket visit with discussion:

   What effect does advertising appear to have on the price of coffee?

Additional Activities:

7. Invite faculty or parents to a "tea". Students plan, prepare, and serve beverages.

Evaluation:

Worksheet
Quizzes
Participation

STUDENT LAB SHEET

Beverages Name _____

Cocoa

1. What is cocoa? *(Chocolate flavored substance – from bean – available in powder form.)*
2. What basic difference would there be between cocoa as served for a breakfast beverage and hot chocolate served in the afternoon? *(PM sweeter)*
3. What is the principle by which cocoa is prepared described in *Guide to Modern Meals* or similar? *(Cocoa is starch and is cooked according to the same principle.)*

Coffee

1. Prepare a chart showing the kinds of coffee makers available and the grinds of coffee suitable for them. (Students research or teacher demonstrate.)

Method of Preparation	Description	Grind
Drip		
Percolator		
Vacuum		

2. What is the price of coffee per pound?
   How many cups of coffee will a pound of coffee make?
3. What rules for the preparation of coffee prevent bitterness?
   a. *(Use a clean coffee pot)*
   b. *(Do not extend brewing beyond recommended time)*
   What are some additional rules for better coffee
   (Brew 3/4 pot capacity) *(Use proper grind for pot)*
   (Use fresh cold water) *(Serve immediately)*

Tea

1. How should tea be prepared? (List the steps)
   (Bring water to boil
   (Rinse tea pot with hot water
   Pour freshly boiled water over tea – 1 tsp. per cup
   Cover and steep 3-5 minutes.)
2. Coffee brands – Prices. List as many as you find.
   Name of supermarket _____

Brand and type	Size	Price	Comment

3. Compare the prices of the following:

Tea bags	Cost per box	Weight of Box	Cost per lb.
100			
48			
16			
Loose tea			

4. How many cups of tea will 1 lb. of tea make? *(200)*

5. Vocabulary:

   Caffeine

   Tannins

   Brew

   Steep

6. What are some interesting suggestions and combinations for preparing punch or other similar beverages?

(Hot spiced or mulled cider)	*(Cranberry-orange)*
(Cranberry-pineapple-lemon)	*(Sherbet and Ginger Ale)*

UNIT 26

INTRODUCTION TO FOOD SALES – SANDWICHES

Objectives: Upon completion of this unit the student will –

Prepare a product for sale (sandwiches) using efficient techniques.

Select sandwich varieties suitable to customer tastes; plan and prepare sandwiches for sale.

Operate a sandwich shop for one day.

Prepare a variety of party sandwiches that meet attractive and flavorful standards.

Topics:

A. Luncheon Sandwiches
B. Party Sandwiches

Topic A – Luncheon Sandwiches

Objectives: The student will plan for, conduct, evaluate, and calculate profit and loss of a sandwich sale.

The student will demonstrate speed, efficiency, the ability to work under pressure, and the ability to work with public in a business – consumer relationship.

Lessons:

1. Distribute sandwich lab sheets. Students research and collect a variety of sandwich fillings for possible use in a faculty sandwich sale.

2. Establish with students the criteria for a satisfactory sandwich product.

   a. Protein requirement

   b. Spreads and fillings spread completely to edges

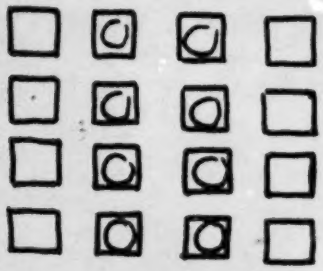
   c. Flavorful fillings, which complement or are complemented by the bread and are manageable, i.e. vegetables such as celery finely chopped, sauces not so abundant as to drip during eating.

   d. Adequate size for customer, price, use, time of day.

   e. Properly and appropriately garnished, cut and wrapped.

3. Conduct comparative study of sandwich prices.

4. Demonstrate or use transparencies to show mass production techniques in preparing sandwiches.



a. Arrange bread slices
b. Spread all slices
c. Apply fillings to bottom slices
d. Place top slice on sandwich
e. Cut and wrap

5. Student discuss the steps for selling sandwiches:

A. Assess tastes
B. Plan date, types, price
C. Advertise
D. Take advance orders
E. Revise plans, shop
F. Prepare and sell

6. Students plan and conduct a sandwich sale according to procedures or steps established above, following instructions in Part I on the lab sheet.

7. Evaluate the experience, plan to increase efficiency, productivity, and customer satisfaction – and decrease losses in time and materials. Repeat the sale after extensive evaluation and re-planning.

Additional Activities:

8. Chart the profits and losses for each kitchen on the chalkboard or overhead projector:

Kitchen or Group	# Sandwiches Prepared	# Sold	Price / Sandwich	Total Earned	Cost of Material	$ Profit	$ Loss

9. Discuss additional costs considered in operating a restaurant:

    a. salaries
    b. fuel, furnishings, equipment
    c. taxes
    d. insurance
    e. breakage, losses through theft, etc.

10. Discuss the concept of varying profits on items: loss leaders.

11. Plan several promotional schemes for a sandwich shop.

Evaluation

Student performance and participation.

Resources:

Shank, Fitch, Chapman, *Guide to Modern Meals.*

Topic B – Party Sandwiches

Objectives: The student will prepare a variety of party sandwiches using assorted fillings.

The student will prepare dishes using bread crusts removed during the preparation of party sandwiches.

Lessons:

1. Students research sandwich-making to collect a variety of sandwich fillings and party sandwich ideas.

2. Demonstrate the preparation of pinwheel sandwiches.

3. Students use a variety of fillings and breads (including tinted or colored bread ordered from a bakery) and prepare an assortment of party sandwiches to be sampled in class. (Freeze bread crusts). Invite faculty members to the sampling session.

4. Plan to prepare and sample a variety of dishes using bread cubes or crumbs prepared from crusts which have been removed from bread during the preparation of sandwiches: Brown Betty, bread pudding, scalloped vegetables, oven cheese fondue, Caesar salad with croutons, and others.

Additional Activities:

5. Plan and cater activities for school groups, serving assorted party sandwiches as one of the menu items.

Evaluation:

Student Skill
Student Participation

Resources:

Shank, Fitch, Chapman, *Guide to Modern Meals.*

STUDENT LAB SHEET

Sandwiches Name _____

Objectives: (develop with students)

Problems: Thoroughly study three references (minimum) on sandwich making before beginning the lab.

I. Sandwich Shop. Plan, organize, and carry out a sandwich sale. Each kitchen is to prepare for sale ten sandwiches of their choice. (One type per kitchen). Calculate costs and procure funds from teacher. Sell at ten per cent profit (to cover losses). Complete and hand in sheet regarding procedures, costs, profits, etc. Plan for advanced orders if possible. Plan for orderly distribution of the product.

Class Manager _____ Date of sale _____

II. Research carefully all references possible, then plan for a sampling session illustrating interesting, well-planned sandwiches. Prepare enough for one sample per person.

Kitchen One	Open canapés
Kitchen Two	Ribbon loaf
Kitchen Three	Sandwiches using canned bread
Kitchen Four	Checkerboard sandwiches
Kitchen Five	Pinwheel sandwiches

Related Information:

1. Which sandwich fillings freeze? *(meats, fish)*

   Which fillings do not freeze successfully? *(Those containing eggs and mayonnaise.)*

2. Name fifteen sandwich fillings or combinations: (Browse)

   _____ _____ _____

   _____ _____ _____

   _____ _____ _____

   _____ _____ _____

   _____ _____ _____

3. Price the following items, citing source:

   a. BLT – restaurant _____ BLT – home _____

   b. Turkey sandwich – restaurant _____ 1/4 lb. sliced turkey _____

   c. Tuna sandwich – restaurant _____ 1 small can tuna _____

4. **Name several uses for bread crusts** (which may have been trimmed from bread to be used for fancy sandwiches.)

_____ _____ _____

_____ _____ _____

5. **For what purpose would you order colored bread sliced lengthwise?**

(rolled or cut out sandwiches)

Where and how can you obtain it? *(Order in advance from bakery)*

What does it cost?

REPORT OF SANDWICH SALE

Kitchen # _____ Basic responsibilities:

Members: Leader _____ _____

_____ _____

_____ _____

_____ _____

Product prepared: _____

Costs:

Ingredients Used	Costs (projected)	Costs (actual)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	Total _____	Total _____

Total Cost _____ No. of servings _____ Cost per serving _____

Cost of ingredients X .10 = _____ Divided by No. of servings _____

= Cost to customer _____

Actual number of items sold _____ X Cost to customer _____

Total _____

+ or - cost of supplies _____ red _____ black

UNIT 27 – TERMINOLOGY – GOURMET FOODS

Objectives: At the conclusion of this unit the student will –

Identify and describe seventy terms which include foods, dishes, and advanced methods of preparation.

Exhibit a wholesome attitude toward new foods and sample new foods willingly.

Demonstrate ability to derive descriptions and definitions.

Lessons:

1. Review, pronounce, and discuss the definitions of vocabulary list. (Suggestion: this may be done in sections, i.e., 35 words at a time).

2. Review and practice with students the concept of deriving definitions by perusing recipes. Look in two or three recipe sources. Answer the following:

    a. What classification of food is it?
    b. What is the predominant flavor?
    c. Are there special preparation procedures?
    d. What is the characteristic appearance, if any?

3. Students prepare and sample foods from vocabulary lists.

4. Vocabulary Bee: Divide students into groups or teams. Have students define words.

5. Bulletin board depicting dishes in list.

Evaluation:

Games
Crossword puzzles, word scrambles
Quizzes

Resources:

Betty Crocker Cookbook
Better Homes and Gardens Cookbook

FOOD TERMS: (These definitions are readily available or may be derived.)

1. a la carte
2. ambrosia
3. almondine
4. anchovy
5. antipasto
6. au gratin
7. au jus
8. baba
9. baked Alaska
10. Bavarian cream
11. bisque
12. blanc mange
13. Bombe
14. borsch, borscht
15. bouillon
16. brioche
17. brown Betty
18. cafe au lait
19. canape
20. caramel
21. caviar
22. charlotte russe
23. chateau briand
24. chef's salad
25. Caesar salad
26. chiffon
27. cobbler
28. consomme
29. crepe suzette
30. croissant
31. crouton
32. curry
33. demitasse
34. du jour (soup)
35. entrée(American)

36. en brochette
37. fillet (or filet)
38. filet mignon
39. fondue: beef, cheese
40. foo yong
41. frappé
42. gherkin
43. giblet gravy
44. hollandaise
45. hors d'oeuvres
46. julienne
47. kuchen
48. lyonnaise
49. marzipan
50. mocha
51. mousse
52. panscha, penuche
53. parfait
54. pasta
55. paté de foie gras
56. petit fours
57. pilau or pilaf
58. polenta
59. praline
60. puree
61. ragout
62. sauerbraten
63. smorgasbord
64. soufflé
65. subgum
66. table d'hote
67. torte
68. tortilla
69. Waldorf salad
70. Welsh rarebit

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TEST ONE

Food Terms **Name** _____

I Anchovy
Bombe
Borsch
Brioche
Brown Betty
Cafe au lait
Chateau briand

1., 2. Which two are desserts? *(Bombe)* *(Brown Betty)*

3. Which is a beverage? *(Cafe au lait)*

4. Which would be used in an appetizer? *(anchovy)*

5. Which refers to steak served with a brown sauce? *(Chateau Briand)*

6. Which is a type of bread? *(Brioche)*

7. Which is usually made with apples? *(Brown Betty)*

8. Which is a variety of fish? *(Anchovy)*

9. Which is a type of soup? *(Borsch)*

10. Which is a frozen dessert? *(Bombe)*

II. Define:

1. Chef's salad – *(main dish salad, usually greens with ham, cheese, eggs)*

2. Canape – *(small open sandwich with flavorful spread – appetizer)*

3. Bouillon – *(clear soup or broth – light)*

4. Baked Alaska – *(cake topped with ice cream, insulated with meringue, and baked.)*

5. Baba – *(Rum-flavored dessert cake made with yeast.)*

6. Au jus – *(served with natural juices as beef)*

7. Antipasto – *(Italian appetizer salad – a combination of vegetables, meat and cheese.)*

8. A la carte – *(each course of food is priced separately – in a restaurant)*

9. Almondine – *(with almonds – as green beans almondine)*

10. Caesar salad – *(Italian salad – romaine lettuce, croutons, parmesan cheese, raw egg)*

III. Matching:

Place in the space at the left the number of the definition that best describes the term.

(12) ambrosia	1. a thick soup or frozen dessert
(6) au gratin	2. a small cube of toasted bread used as a garnish
(1) bisque	3. a fruit dessert with a biscuit topping
(11) blanc mange	4. a clear soup
(13) caviar	5. crescent-shaped roll
(10) chiffon	6. with cheese sauce and bread crumbs
(3) cobbler	7. hot seasoning usually used in stew or rice
(4) consommé	8. a special type of strong-flavored coffee
(5) croissant	9. a French type of cake served in individually frosted pieces.
(2) crouton	10. a light fluffy dessert made with egg whites or gelatin
(7) curry	11. a pudding
(8) demitasse	12. combination or orange or other citrus fruit sections and coconut
	13. an appetizer of fish eggs or roe
	14. with natural juices
	15. coffee served with hot milk

TEST TWO

Food Terms Name _____

I. Define:

1. en brochette – *(food served on a skewer)*
2. hollandaise – *(a sauce of lemon, butter, and eggs, usually served over vegetables)*
3. lyonnaise – *(cooked with onions as potatoes Lyonnaise)*
4. mocha – *(coffee and chocolate combination)*
5. Welsh rarebit – *(cheese sauce served over toast)*

II. Matching:

Place in the space at the left the number of the definition that best describes the term:

(5) fillet	1. a rice dish
(6) filet mignon	2. with mixed vegetables (Chinese)
(11) fondue	3. crisp herb bread
(8) frappe	4. vegetables cooked and sieved
(13) gherkin	5. meat or fish without bone
(7) julienne	6. tenderloin of beef
(14) pate de foie gras	7. cut in strips
(1) pilau	8. an ice-fruit juice dish
(9) polenta	9. corn meal dish (Italian)
(4) puree	10. with lemon sauce
(15) ragout	11. a cheese or beef dish cooked at the table
(2) subgum	12. marinated pot roast
	13. a small cucumber used for pickling
	14. goose liver paste
	15. a type of stew

III.

Kuchen
Marzipan
Mousse
Panocha
Petit fours
Praline
Soufflé
Torte
Tortilla

1. Which two may be both main dishes and desserts? *(Mousse)* *(Soufflé)*
2. Which three are candies? *(Marzipan)* *(Panocha)* *(Praline)*
3. Which is almond flavored and shaped like miniature fruit? *(Marzipan)*
4. Which three are classified as dessert cakes? *(Kuchen)* *(Petit Fours)* and *(Torte)*
5. Which is Mexican in origin? *(Tortilla)* also *(Penocha)*

TEST THREE

Food Terms **Name** _____

I.

Ambrosia	Chiffon	Julienne
Au gratin	Cobbler	Mocha
Au jus	En brochette	Pate de foie gras
Bisque	Fillet	Pilaf
Blanc mange	Filet mignon	Welsh rarebit
Brown Betty	Frappé	Torte
Chateau briand	Hollandaise	

1. Which three represent a form of or method of serving beef? *(Chateau briand)* *(en brochette)* and *(filet mignon).*
2. Cut in strips *(julienne)*
3. A dessert cake of many layers *(torte)*
4. A dessert or salad of citrus fruit and coconut *(ambrosia)*
5. Served on a skewer *(en brochette)*
6. A combination of coffee and chocolate flavors *(mocha)*
7. Meaning served with natural juices *(au jus)*
8. Fish served after first being boned *(fillet)*
9. Two cheese dishes *(au gratin)* and *(Welsh rarebit)*
10. Which may refer to a soup or a dessert? *(bisque)*
11. Which eight may be desserts? *(ambrosia)* *(bisque)* *(blanc mange)* *(Brown Betty)* *(chiffon)* *(cobbler)* *(frappe)* and *(mocha)* *(torte)*
12. Goose liver paste, a delicate appetizer *(pate de foie gras)*
13. An Indian rice dish *(pilaf)*
14. A dessert with a biscuit topping *(cobbler)*
15. A dessert of crushed ice and syrup *(frappé)*
16. Pudding (blanc mange)
17. Lemon-flavored sauce (Hollandaise)

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